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ORIGINAL ARTICLES.

REMARKS ON THE SIGNIFICANCE OF SOME NERVOUS SIGNS AND SYMPTOMS.

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To give a reason for my remarks about the practical value of certain nervous signs and symptoms, I preface them by brief accounts of two cases that have come under my observation.

A gentleman contracted syphilis. Some years later he consulted a neurologist about anomalies of sensation, weakness and stiffness in the lower extremities, giving, of course, his history. He was told that he had hysteria, and treated in consequence. Fortunately his business called him into the northern woods, where aggravation of his symptoms forced him to consult a country doctor, who recognized the nature of his spinal disease and put him on proper treatment, much to the patient's benefit. However, the patient was treated too late, for he was thereafter afflicted with moderate spastic paraplegia and incontinence of urine. Some years later he submitted to an operation, presumably for his urinary trouble, and died on the third day after the operation.

A physician contracted syphilis in treating a patient. He submitted the primary sore to a celebrated dermatologist, who recognized its specific nature and treated him in a modern fashion for the disease. Iodides caused headache and were discontinued (very large doses of iodides have been taken since without trouble). Later, while doing an operation, the patient felt weakness in his right leg, and a half-hour later he could not get into his carriage. When the dermatologist reached him his symptoms were those of beginning hemiplegia, and he was consoled by the diagnosis of *neurasthenia*. To-day the patient presents the typical condition of organic hemiplegia.*

It is my conviction that the errors made in these two cases were due to certain statements that are to be found in many works on neurology—statements that are misleading to the inexperienced, if not absolutely false. It should be added, however, that such errors are not infrequently the result of superficial examinations.

There is a common professional belief that there is often so close a resemblance between functional and organic disease of the nervous system that a differential diagnosis is impossible. Nothing could be further from the truth, for such cases are rare, and it is my purpose to make some statements here that should aid in the correction of this error.

* I contend that there must have been in these two cases signs and symptoms, besides the history, to arouse a suspicion, if not to establish a positive certainty of organic nervous disease.

For example, we hear and read about a foot-clonus;[1] of exaggerated or diminished deep reflexes;[2] of Babinski's sign in functional nervous disease;[3] of increased or diminished reflexes and foot-clonus during fatigue;[4] of anomalies of pupillary reaction[5] and fibrillary muscular twitchings in neurasthenia and other nervous functional disturbances. The fact is that writers take too much pains to emphasize resemblances, and take too little trouble to point out differences.

But faults of observation are responsible for many errors: meralgia paresthetica (not to mention tabes) is almost always mistaken for rheumatism, as are psychic pains, if they happen to be in the neighborhood of a joint. In either case an examination carefully conducted would settle the question.

Notwithstanding the widespread assumption of similarity of the two diseases,[6] I think general paralysis (paresis) should never be mistaken for neurasthenia, for the very good reason that a so-called case of neurasthenia, if it be a case of "paresis," always presents certain signs and symptoms that are indicative of the organic disease, if they are looked for, and nervous weakness never presents such signs of organic disease. In other words, it is my firm conviction that when a case of so-called neurasthenia finally becomes a frank case of paresis, the unforeseen result is merely due to error of observation and not to absence of distinguishing symptoms.*

With apology for my dogmatic statements, the following discussion is an expression of my views of the diagnostic value of certain signs and symptoms of disease of the nervous system.

Foot-clonus is an unequivocal sign of organic nervous disease. It is said to occur in functional disease of the nervous system; it does not.[7] The so-called false foot-clonus is no clonus at all, but simply a tremor that continues after the upward tension of the foot is removed. The slight and transitory vibratory movements that occur in normal persons when they are examined for foot-clonus do not constitute the sign. In examining for foot-clonus the whole limb should be brought into a state of relaxation by partial flexion of the thigh on the pelvis and the leg on the thigh, after which the forced dorsal flexion of the foot will elicit foot-clonus if it be possible. This sign is equivalent to exaggeration of the ankle-jerk.

Normally the ankle-jerk is most readily elicited by placing the patient in a kneeling posture in a chair with the ankles projecting beyond its edge and striking the tendo-Achilles. When this reflex is exaggerated it may be elicited in almost any posture by tapping on the tendo-Achilles or the muscles of the calf; but the best criterion of exaggeration of this reflex is the presence of foot-clonus.

Diminution of a deep reflex is relatively more difficult to estimate; it indicates organic disease. When with proper care for relaxation of the limb and resort to the procedure of Jendrassek, we cannot cause a deep reflex to appear after repeated trial, we are justified in referring its absence to an organic cause. If a reflex be feeble as compared with that of the opposite side, the difficulty is increased, for we are forced to judge whether we are dealing with exaggeration on the one hand or diminution on the other. In general, with a lively reflex on

* Recent study of the cerebro-spinal fluid has proved that it should always be examined in doubtful cases of organic cerebro-spinal disease. Lumbar puncture is an easy means of obtaining it.

one side without clonus or other accompaniment of exaggeration, and a diminished reflex on the other, we may conclude that we have to do with a unilateral diminution of the reflex. This is applicable to the knee-jerk and as well to the ankle-jerk.

It should be understood that the ankle-jerk is as constant* as the knee-jerk, and that alterations of it are as significant as those of the knee-jerk.[8]

It is very common to read of knee-jerks as *plus* or *minus*, without any given data of the method by which the increase or decrease was determined. We should take into account that the energy of the knee-jerk varies exceedingly and normally with the individual examined; in other words, that if both knee-jerks be equal, it may be extremely difficult to determine a pathologic alteration of them, considered alone. It may be necessary to "re-enforce" in order to elicit the knee-jerks in a normal person; it may be that the knee-jerks appear with the slightest tap on the tendons in a normal person. How then are we to give the state of the knee-jerks clinical significance? In answer I would say that exaggeration can be so judged only in connection with other conditions: extensive and very quick excursion of the leg with clonic movements of it; possibility of exciting the reflex in postures that never permit it normally (hyper-extension and pronounced flexion?); patellar-clonus; foot-clonus; the sign of Babinski.

Diminution or absence of the knee-jerk is to be determined only by its absence on one or both sides under all methods of examination, or difficulty in causing it to appear on one side when on the other side it presents none of the accompaniments of exaggeration. With a very lively knee-jerk on both sides without other indications of exaggeration, we are not justified in looking upon them as pathologic. I do not regard reflexes as necessarily pathologic when they both require "re-enforcement" and are equal. Very feeble reflexes (especially if one be feebler) that do not alter with "re-enforcement" are more certainly pathologic. The term "re-enforcement" is unfortunate; Jendrassek's maneuver does not necessarily re-enforce a reflex, but it may merely remove inhibitory influences (attention, involuntary and voluntary tonicity of muscles) that prevent complete relaxation of the limb.†

I have now under observation a case of paralytic dementia presenting some tabetic symptoms in whom the left knee-jerk is present and feeble, the right absent; the left ankle-jerk is absent, the right present and feeble—without resort to Jendrassek's experiment. When this maneuver is made the reflexes present become more marked, and very feeble jerks appear where they seem absent. This would seem to prove that the maneuver brought about a real re-enforcement, but I would contend that nothing actually proves this; it is as justifiable to assume that without the maneuver the relatively greater tonicity of the opposing muscles is sufficient to prevent the reflex movement of the muscles enfeebled in tonicity; that the experiment diminishes the tonicity of the opponents and

* It is understood that examination must be made on the bare skin. It should never be said to be absent unless it has been found absent repeatedly with examination in the kneeling posture. I am at present making notes of all cases examined, and preparing them for publication. At this moment I have notes of 325 consecutive cases in which the ankle-jerk was present, with one case in which it was absent for cause—organic disease. I have, in many hundred cases, never seen it absent except in frank cases of organic nervous disease.

† S. Wier Mitchell (Ner. Dis. by Amer. Authors, p. 28) attributes "re-enforcement" "to rise in the tonus of all the muscles of the body." This explanation of re-enforcement is vitiated by statements made on the same and the following page of the work cited.

allows those concerned to act. If all muscles of the body were increased in tone by Jendrassek's experiment, we might expect the feeble knee-jerk to disappear like its fellow. If one carefully observes the knee-jerk and ankle-jerk in routine practice, it will be remarked that they occur under identical conditions of position with reference to strain on the respective tendons. If a strain be put upon the tendo-Achilles by dorsal flexion of the foot, the ankle-jerk will not appear, or only very feebly in normal persons (this accounts for the prevalent belief that it is inconstant); if the leg be at a right or more acute angle with the thigh, the knee-jerk will present similar defects in normal persons. This tends to prove that it is not so much passive tension of a muscle that aids in the production of the jerk, but rather that the jerk is favored by a certain degree of passive relaxation. The best condition for production of the ankle-jerk is *decided relaxation of the calf-muscles* with slight plantar flexion of the foot; slight voluntary or passive dorsal flexion tends to prevent the jerk. Similarly, the position at an obtuse angle of the knee on the thigh is the most favorable for eliciting and estimating the knee-jerk. Furthermore, the manipulations necessary for the production of ankle-clonus and patellar clonus are in striking contrast with those that favor the occurrence of the corresponding jerks; clonus occurs only when a certain strain is exercised and maintained on the muscles concerned—the exact opposite of the condition that favors the jerks. This suggests that it *may* be possible to find an easy criterion to estimate pathologic exaggeration of the deep reflexes in testing for them in postures causing hypertension of the corresponding tendons.

It is the careless estimate of lively knee-jerks as *plus* or exaggerated that supports the current belief that we may find *exaggeration* of the deep reflexes in hysteria, neurasthenia and functional nervous troubles in general. *True exaggeration* of the deep reflexes as defined in a preceding paragraph never occurs in any functional nervous disorder, though it may occur in some forms of poisoning (strychnia) and *possibly* (*?*) in some forms of auto-intoxication. However, it is unsafe to regard *alteration* of the reflexes in a case of suspected auto-intoxication as of mere functional significance, for the reason that when such alteration of the reflexes occurs in the course of auto-intoxication, it is a sign that actual material changes have supervened which will probably remain.

The deep reflexes of the upper extremity might be discussed similarly. It is only necessary to make a few qualifying statements. Here, again, it is easier to determine the existence of exaggeration than that of diminution, for these reflexes are not normally so generally distinct as those of the lower extremity. However, differences between the two sides are always significant, and furthermore a very lively radial reflex is in itself more surely indicative of pathologic exaggeration than mere liveliness of the knee-jerks. Very frequently in impressionable nervous persons the knee-jerk is voluntarily made very lively by attention and consequent expectation of the movement, proof of which is easily found if the expected blow of the hammer fails to reach its mark: the movement occurs without any blow at all. This state of affairs does not obtain in relation to the radial reflex. A very lively radial reflex on one side is almost certainly pathologic; for a patient is rarely able to increase it voluntarily or to imitate the quick, sharp jerk that is characteristic of true exaggeration of this movement.[9] In normal individuals the radial reflex can be obtained in many cases only after much care to obtain complete relaxation of the whole arm; when it is

exaggerated no special care is required to elicit a lively jerk. I would say then that a very lively radial reflex may almost always be regarded as pathologic (exaggerated), and always so if it be unilateral. In the upper extremity we have not the additional aids that help us in estimating exaggeration of the reflexes of the lower extremity; we but rarely find wrist-clonus; so we are forced to rely almost entirely on the character of the arm reflexes alone in judging of exaggeration or diminution. Of course, the state of the reflexes in the lower limbs often helps us to judge those of the upper extremities.

Concerning the significance of alterations of the jaw-jerk, we have less positive data, but it may be said with a fair degree of truthfulness that a very lively and easily induced jaw-jerk is pathologic, and that jaw-clonus is always an *exaggeration* of the reflex, having the same meaning as exaggerated reflexes elsewhere.

The variations of the skin or superficial reflexes in general, are so equivocal that their detailed consideration here would take me too far; among them, however, there is one exception, a certain variation of which constitutes the remarkable *sign of Babinski.*

When the sole of the foot is irritated by a pointed instrument, the normal reflex movement is that of flexion of the toes, dorsal flexion of the foot, flexion of the leg, and even flexion of the thigh, with possibly contraction of the tensor vaginæ femoris. Babinski was the first observer[10] to note a variation of this reflex in certain cases, namely, dorsal flexion, or extension of the toes, especially of the great toe. This observer was successful in determining the fact that extension of the great toe when the sole was irritated was invariably a sign of pathologic significance, its physiologic presence in infancy excepted. His conclusions have been confirmed by many observers in many hundreds of cases, and Babinski's sign (the toe-phenomenon) has become classic. Babinski's sign has been called a reflex; this has been denied; its importance for diagnosis has been questioned by a few observers, especially by those who emphasize resemblances rather than differences between organic and functional nervous diseases. My own observation confirms Babinski's original assertions, and I am able to add that in a certain kind of organic disease of the spinal cord the toe-phenomenon can be elicited by various kinds of irritation of the sole: *in ten cases of multiple sclerosis* Babinski's sign appeared on the application of cold and heat to the sole, and the reaction was in all cases more marked than that following irritation of the sole with a pointed instrument.*[11]

Babinski's sign is always indicative of *disturbance* in the central motor neuron—the pyramidal tract; the *disturbance* is organic in the sense that it depends upon material interference with the functions of the central motor tract. It does not necessarily indicate *degeneration* of the motor tract—*i. e.*, that the *disturbance* is incurable—but it does indicate a disturbance that is not merely functional. The *toe-phenomenon* does not occur in hysteria; in other words, it does not occur in mere psychic disorders. It occurs before complete development of the pyramidal tracts, and when strychnia is exercising its physiologic or toxic influence on the nervous system; it occurs when pressure affects the cord or the cortical motor areas, and disappears with the removal of such pressure. Doubtless further observation will show other material conditions that will

* I have observed the same result in many cases of common organic hemiplegia.

induce the sign. We are now justified in regarding it when present as the most important and unequivocal means of distinguishing between organic and functional (psychic) disturbance of the central motor nervous system. It is further very important because it is found in the very early, as well as in the later stages of organic alterations of the central motor tracts—before the development of exaggerated deep reflexes, and at a time when diminution of deep reflexes is the forerunner of later exaggeration of them. It must be added that some care is needed in eliciting and interpreting Babinski's sign, for voluntary movements of the foot and toes may simulate or obscure it. Careful study of the plantar reflex and its alterations is the only means of avoiding a possible error. It must be understood, also, that it is the presence of Babinski's sign that affords help in diagnosis; its absence does not justify an opposite conclusion.

The anal (skin) reflex is also important, though I am unaware of any serious studies of its variations. It is examined by irritation of the skin or mucous membrane immediately contiguous to the anus. Its presence is clear proof of the integrity of the lower portion of the cord; its absence is testimony of an opposite kind. We have no means of estimating *directly* true and voluntary exaggeration of it.

Owing to the lack of definite knowledge of the variations and value of the reflexes of the genitals of the two sexes, they do not call for discussion here.

The reflex and associated movements of the iris are of capital importance. Loss of the reflex to light is an unerring sign of organic disease (the influence of poisons excluded); marked inequality of the pupils has the same meaning when mechanical (scars) or toxic influences are wanting. Myosis is in general indicative of organic disease, but mydriasis alone is not. The Argyll-Robertson pupil is a sure sign of organic disease, *and almost as sure a sign of precedent syphilis as is a hard chancre of the nature of its cause.*[12]

The deductions from the foregoing remarks may be stated briefly as follows: First, alteration—exaggeration or diminution—of the deep reflexes is always indicative of organic nervous disease; second, Babinski's sign (the physiologic presence noted excepted) and foot-clonus are always signs of organic nervous disease; third, anomalies of pupillary reaction to light have the same significance.

To these deductions there is one exception: disease of a joint may cause atrophy of muscles about it, and with such articular disease there may be *exaggeration* of related deep reflexes, with all the accompaniments characteristic of it. This is, then, the only known exception to the rules already stated.*

The pupillary anomalies of reaction that occur temporarily during or after epileptic or hysterical seizures, or as an accompaniment of profound disturbance of consciousness, owing to their transitory character, may be ignored in this discussion, as are those due to disease of the optic media and nerve. The fibrillary twitchings of muscles said to occur in neurasthenia require much closer study and analysis before they can be said to be identical with those so characteristic of slow pathologic processes affecting the motor cells of the anterior

* Gowers regards arthritic muscular atrophy as due to nutritional changes in the cord, and also states that persistent changes of "myotatic irritability" cannot be dependent on mere functional derangements. It should be said that the writings of this observer are in accord with the views expressed here; but the truth as there stated might be unrecognized when considered in connection with many qualifying and theoretical remarks.

gray matter of the spinal cord. That pathologic exaggeration or diminution of the deep reflexes occurs during fatigue,[13] there is no evidence to substantiate; on the contrary, it may be said that careful investigations[14] made of this subject prove the contrary, notwithstanding the fact that it has been shown that fatigue causes a change in the material condition of motor nerve-cells in lower animals.

It will be understood that there are many other more or less unequivocal signs that aid in making a differential diagnosis of functional and organic nervous disease, to which no reference is made.

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6. Brower & Bannister: Insanity, p. 248, and many others.

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8. J. Babinski: Sur le Reflexe du Tendon d'Achille, Proceedings Société de Neurologie de Paris, 2 Mai, 1901, with numerous citations.

9. J. Babinski: Diag. Dif., Gaz. de Hopitaux, 5 and 8 Mai, 1900.

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11. A Study of the Sensory Anomalies of Multiple Sclerosis, in course of publication, by E. de Gothard & C. G. Chaddock.

12. Charpentier: Relations entre les Troubles des Reflexes Pupillaires et la Syphilis, Paris, 1899.

13. Lombard's experiments (Am. Jour. of Psychology, 1887) established the physiologic variations of the knee-jerk, which are not comparable with the pathologic alterations as here defined for the purpose of actual clinical work.

14. Charpentier: Verbal communication of studies made in hundreds of soldiers after prolonged marches and exposure.

TOBACCO POISONING.[1]

By Dr. A. C. H. Friedmann, of Colorado Springs, Colorado.

While the dangerous effects of tobacco poisoning are known to affect almost every part of the human organism, it is a fact that the result which brings the patient quickest to the physician is the injury which it causes in the eye, and yet in very many cases the patients come very late, often too late, under the observation of the specialist. This is caused by the circumstance that the disease starts very rarely with the central impairment of the vision, and mostly with the peripheral.

I do not desire before this society, devoted to general medicine, to dwell exclusively upon the ocular manifestations of tobacco intoxication, but will also shortly enumerate the injurious effects upon other parts of the organism. Before doing so, let me briefly report the results of the most recent studies of the chemism of tobacco.

1. Read before the El Paso County Medical Society.

Tobacco, when smoked, according to the analysis of H. Thoms,[1] produces nicotine, pyridine and some homologues of the latter; also an ethereal oil, prussic acid, and small quantities of carbon monoxid gas. Seventy-five per cent. of the nicotine which goes into the smoke remains unchanged; 25 per cent. decomposes. It is wrong to believe that all of the nicotine is contained in the smoke. A great part of it is deposited in the stump of the cigar, so that this contains finally from three to four times more nicotine than it did before the cigar was smoked.

Some cigar-makers claim to have invented health cigars, where they make the nicotine non-soluble by treating it with an extract of origanum vulgare. In examining these cigars it has been found that 22½ per cent. of the nicotine is decomposed and absorbed—that means just about the same percentage as in ordinary cigars. Figure from this and you can appreciate the alleged value of the health cigar.

In order to determine the effects of the presence of CO gas in the smoke, experiments were made by F. Wahl.[2] He found in tobacco smoke from 0.6 per cent. to 2.7 per cent., and in cigar smoke from 1 per cent. to 7.6 per cent CO gas. Experiments in which from twelve to fifteen cigars were smoked in a small room—a certain number by the author and the remainder artificially—showed that in spite of the very irritating effect of this atmosphere (especially upon the conjunctiva), no symptoms of CO gas intoxication were noticeable. The air of the room contained 0.02 per cent. CO gas. On testing some rabbits which were confined in the room during the experiment, it was found that their blood had absorbed some of the CO gas. Therefore it may be conceded that, under ordinary circumstances, the CO gas generated by the tobacco does not injure the smoker. It remains to determine the cumulative effects of the poison in chronic smoking.

M. Breitung[3] gives us a very good description of the dangers threatening the habitual smoker as soon as he quits. He proves that the strength of the tobacco depends less on its percentage of nicotine than of ammonia. The nicotine being present in the form of salt would burn completely if it were not set free by the ammonia, and so go into the smoke as nicotine.

Statistics prove that the organs mostly injured by excessive smoking of tobacco are those of the auditory and genital systems. No organ of the body, however, is absolutely immune against the poison, though one cannot deny that some of the ailments attributed to the use of tobacco are really caused by the often accompanying use of alcohol.

There exists a vast difference of effects between the different forms of using tobacco. The regular smoking of from twenty to thirty cigarettes always results in more or less injury to the health of the smoker; and while moderate cigarette smoking is without danger, yet the temptation to excess is so great that, almost without any exception, every cigarette smoker succumbs to it. We are, therefore, compelled to call the cigarette a menace to the health of the people, and the national welfare requires the passing of a law against the sale of cigarettes, at least to minors.

1. Thoms, H.: Uber die Rauchproducte des Tabaks. Bericht d. Deutsch pharm. Ges. 1900. Heft 2, s. 19.
2. Wahl, Fritz: Uber den Gehalt des Tabakrauches an Kohlenoxyd. Archiv f. d. ges. Physiol. Bd. 78, s. 279.
3. Breitung, Max (Koburg): Die Bedeutung der Rauchsucht fuer die Volkswohlfahrt D. Med. *. 1900, s. 301

The taking of snuff—which, however, is very rare—does not affect the general health. It only attacks the middle ear by way of the Eustachian tube, and can lead to obstinate forms of chronic otitis media.

Tobacco chewing causes very dangerous intoxication, and tobacco psychosis may arise from it. Therefore the serious effects of tobacco chewing should be insisted upon in all lectures and writings on hygiene.

The injuriousness of excessive tobacco smoking is usually shown upon the heart; weakness of action, slowness of pulse (tobacco heart), and chronic irritation of the trachea, are very frequent symptoms of cigarette smokers who inhale the smoke, and nearly all indulge in that. Tobakosis is a disease whose existence is known only among the laborers in large cigarette factories. It affects the lungs and often leads to tuberculosis.

The absorption of tobacco is rapid, and has been compared to that of hydrocyanic acid. Small birds, near whose beaks nicotine was placed, are stated to have fallen dead without more direct contact. Applications of wet tobacco leaves to the skin of man have caused rapid poisoning, as in the case of smugglers who wrapped their bodies in dry leaves, and when perspiration ensued, were soon overcome by absorption of the nicotine. (Hildebrand, Namias.) The same result has followed the local use of tobacco infusions for therapeutical purposes. Three minutes sufficed for a large amount of nicotine taken into the stomach to kill a man. (Taylor.) The alkaloid is said to act as quickly and powerfully by the mouth as when given hypodermically. (Janessen.) And prompt absorption by the large intestine, as evinced by poisoning after enemata, supports Saboy's contention that this method is peculiarly dangerous. After absorption, nicotine is recognizable in the blood and internal organs, especially in the liver. It is eliminated by the lungs as well as the kidneys.

The chronic tobacco poisoning causes congestion of the air passages with an unclear and raucous voice; the smoker to excess experiences gastric disorders and feeble and intermittent action of the heart, which is termed "narcotism of the heart," while the breathing, which sometimes has a sighing character, may show a peculiar rhythmical fluctuation. Memory is often impaired; muscular movement may become tremulous and uncertain.

The most characteristic symptoms of chronic tobacco poisoning are evidenced in the eye, and the whole complex of them is known under the name of tobacco amblyopia. The time necessary for the development of this disease is individually different and ranges from six months to many years. It seems to me mostly dependent on the resistance of the individual to the absorption of the poison. The most noticeable features of it are the impairment of the vision and the change in color perception. Some of the less constant symptoms are pallor of the temporal side of the optic disc and indistinctness of its outlines. Highly characteristic of tobacco amblyopia is the presence of a central scotoma. This scotoma progresses in most cases from the blind spot to the point of fixation, which, in advanced cases, it always reaches. The clear perception for red is primarily interfered with, while white remains fairly appreciable. The eye affection is often accompanied by gradual failing of the hearing. A mist or a cloud always before both eyes, especially in day time, the trouble in reading fine print, eccentric fixation caused by central scotoma, the defective field of vision for red and green in the beginning, and for white in advanced cases, are the most characteristic symptoms of tobacco amblyopia. The disease in its first stages is

mostly a curable one, as far as checking its progress is concerned, but one very seldom sees cases in which after a substantial loss full eyesight is regained. Advanced stages almost invariably lead to optic atrophy, the field of vision becomes narrower and narrower, the scotoma gets larger and larger, and ends in extreme cases in absolute blindness. Active therapy is of little avail; the use of tobacco and liquor must be absolutely interdicted, whereby the patient has to be instructed about the sometimes very threatening symptoms of abstinence, which might otherwise drive him again to indulge in the habit. Strychnia injections are sometimes of service; regulation of the diet and avoidance of excitement and dissipation should also be enforced.

The relation of alcohol to tobacco as a cause of amblyopia is disputed. Many German authors (Uhthoff) maintain that alcohol is the more powerful of the two, while British authors believe the opposite; Hutchinson even suggests that alcohol may have some counteractive effect when excessive smoking is practiced. However, I believe that the effects of alcohol on the eyes are decidedly different from the effects of tobacco, and as a rule not half as serious. I do not believe that tobacco can destroy the entire nervous system as alcohol does, while the demoralizing effect that often follows alcoholism is never produced by the excessive use of tobacco. The greatest danger lies, of course, in the generally known fact that most drinkers indulge also in the tobacco, and *vice versa*, and it is very difficult for physician and patient to fight both enemies at the same time.

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LABORATORY DIAGNOSIS—ITS RELATION TO THE GENERAL PRACTITIONER.

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In these days of progressive medicine, when the empirical is being supplanted by methods scientific, and when the dogmatic is rapidly disappearing in the light of rational investigation, the modern practitioner is beginning to realize the dawn of a purely scientific era in the realm of medicine and surgery. It therefore behooves him as the curator of public health to awaken to the use of practical laboratory methods which have come into general use only within the last decade, and to arm himself with these the most accurate and rational means of diagnosis.

Scarcely more than ten years ago clinical laboratories were unknown, and to Dock of Ann Arbor is due the credit for the establishment of the first clinical laboratory of medicine in this country. His work was immediately followed up by Osler and others until now there is in every well-equipped hospital, and in the offices of many general practitioners, a more or less complete equipment for the handling of blood, urine, sputum and stomach contents, together with the diagnosis of pathological specimens. The purpose of this article is to point out the absolute advantage and necessity of employing laboratory methods of diagnosis, and the ease with which, by careful manipulation and study, they may be made practical in the hands of even an untrained member of the profession.

It is an astonishing fact that the microscope is a stranger in the offices of the great majority of physicians to-day. Their excuse is twofold: First, the greater part of them were schooled before modern laboratory technic was known, and, second, the demands of an extensive practice make it impossible to devote any time to these finer and more accurate methods of diagnosis. Here is

the mistake, and many of the men of twenty years ago have realized it and are as well versed in clinical diagnostic methods as are the more modern product of the laboratory of to-day. Indeed, the general public are demanding more of scientific accuracy from the physician, and the time has come when the bottles of nitric acid and Fehling's solution must be considerably supplemented to meet the demands of even the lay mind.

The possibility of laboratory diagnosis in the hands of the general practitioner predicates a microscope and a small expenditure for apparatus and reagents. The technic and tests may be obtained from various excellent handbooks on clinical diagnosis, and the success depends very largely upon care and skill in manipulation and an absolutely unprejudiced mind in the judgment of results.

The realm of hematology offers a very fertile and important field to the general practitioner, to say nothing of those in the specialties of medicine and surgery. By means of the Tallquist hemoglobin chart, a piece of filter paper, and one point of a stub pen, a quick and reliable hemoglobin estimate may be made within a minute, and comparative work with the Fleischl hemometer has satisfactorily demonstrated that the results by the Tallquist chart are sufficiently accurate for ordinary clinical purposes. From the fresh drop and the oil immersion the malarial parasite may be promptly recognized without referring to the stained specimen. The Widal reaction, which is the nearest to an absolute diagnostic measure that we have in typhoid fever, can be made in a short time when a fresh typhoid culture is on hand. By the examination of spreads in stained specimens a diagnosis of the varied leukemias and anemias is possible. The Thoma-Zeiss apparatus makes it possible to count both the number of red and white cells, thus determining more in detail the severity and nature of the leukemias and anemias.

The leucocyte count may serve as a valuable differential measure in separating measles and typhoid fever from the other acute infections. The presence or absence of leucocytosis has great surgical importance as an earnest of possible perforation in typhoid, in various pus infections and in carcinoma. The importance of the leucocyte count and its interpretation is one of the most interesting fields in diagnostic medicine.

Besides the qualitative and quantitative estimation of sugar and albumin in the urine, a determination of the output of urea is easily and reliably made by the Doremus apparatus. This test is of value in estimating the nitrogenous excretion and the state of the metabolism, especially in the cachexias and wasting diseases. The tests for acetone and diacetic acids are important in cases of diabetes, suggestive of impending coma.

The Diazo reaction, although not absolute, is a valuable confirmatory element in the differential diagnosis of typhoid.

The presence of bile can be quickly detected when present in large quantities by the characteristic foam, and in smaller amounts by the nitric acid test, or the green ring with tr. of iodine. The importance of routine examination of the sediment cannot be too strongly emphasized, for crystalline elements, pus, blood and casts. Pus may be detected in the centrifugated sediment microscopically or by the addition of iodine, which yields the glycogen color reaction. The red blood cells may be recognized microscopically or in traces by the Hemin crystal test. The differential diagnosis between the various forms of parenchymatous

and interstitial nephritis rests very largely upon a careful examination of the size and kind of casts.

In this connection it may be well to speak, also, of tuberculous conditions of the genito-urinary tract and their recognition by staining the dried sediment with carbolic fuchsin and Gabbet's solution. In obscure urethral disorders it is often necessary to make stains of the discharge and determine the presence or absence of the gonococcus.

The necessity of a careful examination of sputum—both macroscopical and microscopical—is generally recognized, yet only occasionally is the practitioner prepared to make these examinations for himself. The search for the tubercle bacillus and the pneumococcus by staining methods should be routine measures. Elastic tissue may be detected after boiling the sputum with sodium hydrate and centrifugating, or more quickly and equally satisfactorily by placing sputum on a piece of ordinary window glass and, after locating suspicious caseous particles macroscopically, press down upon them with an ordinary glass slide and examine under the low power. With a little practice, elastic tissue may be quickly detected by this method.

There should be a routine examination of the stools in gastro-intestinal disturbances, especially for blood, pus, large quantities of mucus, pieces of intestinal membrane, tubercle bacilli and the various forms of intestinal parasites and worms. This is a line of investigation which is naturally superficially carried out in most cases, and, indeed, for that reason alone, the diagnosis is often completely missed. Suspected gall stones should lead to a thorough washing of the stools through a rather fine sieve, and a minute examination of the remaining debris.

Perhaps in no realm of clinical medicine has there been more satisfactory results than in the examination of gastric contents, both for diagnosis and rational treatment. In the hurry of diagnosis the ordinary practitioner prescribes first an alkali, and if that does not relieve, an acid and pepsin is substituted. Consequently, there are to-day a vast army of stomach cases irrationally and unsatisfactorily treated. The use of lavage by means of the stomach tube, the employment of test meals and their chemical examination for total acidity, free hydrochloric acid, the presence or absence of pepsin, rennet and lactic acid, furnish valuable information, both as to diagnosis and treatment. It is also important to make microscopical examinations for the presence of fragments of mucous membrane, pus, blood, fungi and bacteria, as, for instance, the Oppler-Boas bacillus. The determination of gastric motility is made by numerous methods, perhaps none more satisfactory than the administration of salol, and its detection in the urine within certain time limits, as salicyluric acid.

Another quite distinct mine of laboratory procedure, requiring quite another set of apparatus and a distinct training, can, however, be carried on very profitably by the practitioner, and that is the diagnosis of pathological specimens. The debris resulting from a uterine curettage may reveal an extremely glandular development, or perhaps adenoma verging on to carcinoma. An early recognition may thus be the salvation of a patient from later carcinoma. Lymph glands, easily removed, suggestive of tuberculosis, gumma, sarcoma or carcinoma may easily be examined and the definite pathologic process determined. Methods employing celloidin, or even paraffin, require but little apparatus, and the return is, indeed, manifold.

In concluding, it must be clearly understood that the above is, in no way, intended as a complete resume of the means of laboratory diagnosis which are at the bid of the skilled clinical diagnostician. They are simply suggestive of certain lines of work which may and should be more generally prosecuted by the general practitioners of medicine throughout the country. It is by these methods that medicine shall be kept from the ignominy of disrepute and charlatanism, and held upon a solid foundation, with scientific methods at its base and a superstructure of conservative and rational judgment.

CLINICAL REPORT.

APPENDICITIS.

By H. L. Nietert, M. D., of St. Louis,

SUPERINTENDENT AND SURGEON-IN-CHIEF CITY HOSPITAL OF ST. LOUIS, MISSOURI.

During the past year sixteen cases of appendicitis came under our observation. Of this number, three died.

The first case to die was case No. 4, history No. 4482. Patient entered the hospital October 3, 1901, with all the symptoms and signs of a general peritonitis, namely: a small and rapid pulse, marked pain over abdomen, with distention and tympanitis, nausea and vomiting. The tympanitis was present everywhere excepting over the left iliac fossa, where the percussion was dull. The diagnosis was that of general peritonitis; the cause of this could not be determined with certainty. It was decided to immediately perform an exploratory laparotomy. After an examination of the heart and lungs, patient was given chloroform. The abdomen was opened in the median line, and it was found that a marked suppurative peritonitis was present. The appendix was thought of as the most probable origin of the inflammation, and was sought. On searching the right iliac fossa, instead of finding the appendix in its normal location, we found in its place the sigmoid flexure. We decided, therefore, that we had to do with a transposition of organs, and the appendix was then readily found in the left iliac fossa. It was found to be gangrenous, and was removed. The peritoneal cavity was then drained; hot, moist packs were applied, and the patient put to bed. Patient died within twenty-four hours after the operation.

The post-mortem examination showed a general purulent peritonitis, and a complete transposition of all the viscera.

The second case to die was case No. 8, history No. 7076. Patient entered the hospital January 20, 1902, with the following history: Three days prior to arrival he had a pain in the lower portion of the abdomen, which localized itself in the right lower quadrant. The pain rapidly became worse and necessitated his removal to the hospital. He vomited at frequent intervals, and was constipated. Examination on arrival revealed the following: He gave the appearance of being very sick. He vomited at frequent intervals, and complained of intense pain in lower portion of abdomen, especially on the right side. Respirations were shallow and 38 per minute; pulse, 120; temperature, 101° F. On pressure, tenderness was greatest in right iliac region. At the site of greatest tenderness edema and erythema were present. Our diagnosis was perforative appendicitis, with localized peritonitis. Prognosis was unfavorable. This case apparently belonged to that class of patients in which Ochsner advises against immediate operative interference. It was decided, therefore, to treat this case according to the Ochsner method. Firstly, to free stomach of all contents by repeated lavage of the stomach if need be. Secondly, by prohibiting all food or medicine by mouth. Thirdly, relieving pain by small hypodermic injections of morphine. Fourthly, by feeding and stimulating per rectum.

By the above procedures it is calculated to stop all peristaltic movements of the bowels, and thus to prevent the spread of the peritonitis. In this manner time is given for the formation of firm adhesions and localization of the inflammatory condition. After the acute stage Ochsner advises operative interference.

However, the treatment did not have the desired effect, and the peritonitis spread rapidly. After pursuing this treatment for three days, the patient showed definite signs of a general peritonitis. The abdomen was swollen and tympanitic. The pulse was very rapid and small. The respirations were frequent and shallow. Temperature rose to 104° F. It was then deemed best to open, flush and drain the peritoneal cavity. An incision was made in the median line of the abdomen. It was found that the peritoneum was highly injected and covered with a thick fibrinous exudate, which agglutinated the bowels. The appendix was found to be gangrenous, and was removed. The bowel, which was highly distended with gas, was punctured by means of trocar and canula, to permit of its escape. Incisions were made in both lumbar regions for the purpose of drainage. The soft adhesions along the entire course of the bowel were loosened, and the peritoneum was thoroughly irrigated with a physiologic saline solution. Rubber tubes and gauze drainage were introduced. A hot, moist pack, temperature of 115° F., was applied to the abdomen at intervals of six hours. Patient did not improve after the operation, and died the following day.

A post-mortem revealed the presence of a general suppurative peritonitis.

The third case that died was case No. 9, with history No. 6445. Patient entered the hospital with the following history: Present trouble began ten days prior to entering the hospital, with pain in the abdomen. He had been constipated. Examination showed a fluctuating mass in the right iliac region, which was plainly palpable per rectum. Blood analysis showed leucocytosis. These signs, with others, led to the diagnosis of perforated appendicitis with formation of abscess. Immediate operation was decided upon. An incision was made in the right linea semilunaris, over McBurney's point. An abscess, which was well walled off by firm adhesions, was opened. The cavity was carefully wiped out with small pledgets of gauze. The appendix was sought for and removed. The abscess cavity was drained with a small rubber tube. For a period of fifteen days patient did fairly well. At the expiration of this time patient began to cough, had a rise of temperature, and showed some of the signs of pneumonia. About twenty-one days after the operation he complained of frequent chilly sensations, and had severe paroxysms of coughing. Patient expectorated a great deal of purulent sputum, which at no time showed the presence of tubercle bacilli.

The physical examination revealed an area of dullness over the lower portion of right lung posteriorly; an absence of tactile fremitus with the presence of bronchial breathing. Paracentesis thoracis was performed and a purulent fluid withdrawn. A thorocotomy was performed and two inches of the seventh rib, in post-axillary line, was removed. On introducing the finger into the thoracic cavity it was apparent that the abscess led downward, backward and retrodiaphragmatic. The empyema seemed to have originated by the burrowing of pus retroperitoneally from the appendicular abscess upward to the pleural cavity. Rubber tubing was inserted as drainage. Patient was weak on account of general sepsis, and died on February 3, 1902.

Post-mortem examination could not be obtained.

During the past year it was observed that all of our cases of appendicitis were received when the suppuration was already present. In each instance the pain was most intense at or about McBurney's point. In ten cases a distinct tumefaction could be felt in the right iliac region. In six cases a tumor could also be felt on palpation per rectum. In all cases save one there was a localized peritonitis; the latter case (with history No. 4482) presented a diffuse peritonitis.

One of the important signs of the degree of inflammation and for the determination of the presence of pus, was the presence or absence of leucocytosis. Examination of the blood was made in every instance, and an increase in the number of leucocytes was found always present. In all of these cases the Widal's reaction was negative. The pulse, as usual, proved to be a valuable measure for the differentiation of localized from general peritonitis. In the former the pulse was but little altered, while in the latter it became frequent and thready. All cases save four were treated by immediate laparotomy and entire appendectomy. Formerly it was our custom in suppurative appendicitis to open the abscess, drain, and to leave the appendix alone unless readily found. In this series of cases the appendix was searched for and removed in each instance. The technique was thus: The abscess was opened. The pus was carefully wiped out with dry gauze, so as to preclude any possibility of contamination of the general peritoneal cavity. Cæcum was then loosened and carefully drawn forward into the wound. After having carefully walled off the field of operation with gauze sponges, by following the linea it was always an easy matter to find and remove the appendix. General peritonitis in no case followed this procedure.

In case No. 8, which, as seen in history given above, was treated by the "Ochsner method," the patient developed a general peritonitis and died.

From our observations we conclude the following:

Firstly, that the examination of the blood for leucocytosis is an important diagnostic measure.

Secondly, that all cases of perforating appendicitis should be operated upon immediately.

Thirdly, in all instances the appendix should be sought for and removed, whether suppuration exists or not.

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EDITORIAL COMMENT.

THE LAW AND OPHTHALMIA NEONATORUM.

At a recent meeting of the St. Louis Medical Society during a discussion on ophthalmoblennorrhea neonatorum the following interesting fact was elucidated: that upon the statute books of the state of Missouri appears a law bearing upon the prevention of blindness in the newborn. This law, signed by Governor Stone in the earlier part of April, 1895, is of an excellent character, and the state of Missouri is largely indebted for this beneficent legislation to the unselfish efforts of Dr. M. Hayward Post, of St. Louis.

The law referred to reads as follows:

SECTION 1. Should one or both lids of either eye or both eyes of an infant become red or swollen, or should there be any discharge from either eye or from both eyes at any time within three weeks after its birth, it shall be the duty of the midwife, nurse, or other person having charge of said infant, at once, unless for good cause shown, to report the condition of said eyes to a legally qualified practitioner of medicine.

SEC. 2. Every health officer shall furnish a copy of this act to each and every one who is known to him to act as midwife or nurse, in a city or town for which said health officer is appointed, and the secretary of state shall cause a sufficient number of copies of this act to be printed, and shall supply the same to such health officers on application.

SEC. 3. Any failure to comply with the provisions of this act shall be a misdemeanor, and shall be punishable by a fine of not less than ten and not more than one hundred dollars, or by imprisonment not to exceed six months, or by both such fine and imprisonment.

SEC. 4. All acts and parts of acts inconsistent with this act are hereby repealed.

The second interesting point developed in the discussion was that the existence of this law is practically unknown to the medical profession.

The question arises whether this law is in truth a valuable asset to the commonwealth, or, on the other hand, does it fall within that vast collection of useless legislation that burdens the statute books of the United States.

It is the general consensus of opinion among competent ophthalmologists that the eye of the newborn affected with ophthalmia can be saved with little or no injury if proper therapeusis be instituted at an early stage of the affection. A strict compliance with this law would bring the infected eyes of the newborn under the observation of regularly qualified practitioners of medicine at this required early stage. A strict compliance with this law will reduce to no inconsiderable degree the number of the hopelessly blind, for it is common knowledge that approximately 25 per cent. of the hopelessly blind have been the victims of ophthalmoblennorrhea neonatorum. It is well for us to contemplate a possible reduction by almost 25 per cent. of the hopelessly blind; to reflect upon the inconceivable amount of distress, sorrow and suffering that might be removed from already heavily burdened humanity. It is well also for us to contemplate that a strict compliance with this law would save the exchequer of the state a tangible sum which might be wisely applied in developing and furthering the comfort of its remaining wards or otherwise invested in allied channels of an humanitary character.

It needs no further extension of argument to convince any fair-minded man of the incalculable possibilities for good in a strict enforcement of this law. But we are confronted with the unfortunate fact that no conviction and no prosecution under this law have ever been made in the commonwealth of Misssouri; and, furthermore, so far as our information goes, that there never has been a report based upon this law made by a midwife, to the proper authorities of the city of St. Louis.

It is imperative if we desire to secure the benefits possible under this law that the medical profession inform itself of its existence, take pains to disseminate information bearing upon its humanitarian possibilities, and by all reasonable and ethical avenues bring it before the proper authorities. We strongly urge that at the earliest moment a test case be made, and the moral support of the physicians in that particular locality be enlisted in bringing to justice those who either from ignorance or criminal intent are violaters of the law.

We may add in this connection that delegates from the St. Louis Medical Society to the Medical Association of the State of Missouri will be instructed to bring this matter before that body, to the end that its hearty co-operation and valuable support may be enlisted. And it is hoped that the medical profession of the United States, through the American Medical Association, may be induced upon some broad and conservative lines to extend the knowledge, to create plans, and to foster appropriate legislation by which these helpless infants may be protected in their rights against the ignorant, the quack and the criminal.

AUTOGENETIC REGENERATION OF NERVES.

A question of great importance in the physiology of the nervous system is at present being discussed in some of the neurological journals of this country and of Germany. Upon the decision of this question the permanency of the neuron theory, or at least its present meaning, will very likely depend. Since Bethe's demonstration of the neuro-fibrilla and his assertion that the so-called neurones are not anatomical units, the neuron theory has, in the opinion of many neurologists, received a decisive blow. Bethe's demonstration being in the main anatomical in character, was open to the objections which proofs of an anatomical nature, which need for their preparation microscopic technique of great complexity, always present. These objections may be stated as based upon two main facts: First, a method so complex that few investigators are able to successfully follow it, necessarily limits the chances of corroborative evidence. Second, the more complex any histological method is, the greater the chance becomes for the creation of artifacts. When, however, Bethe is able to add to the anatomical evidence of his contention physiological proofs, then his theory immediately becomes of the greatest importance. Such evidence he seems to have been able to present by the following experiments: He excised a portion of the sciatic nerve on one side in young cats and dogs, and by means of a certain method, not as yet made public, he prevented the central and peripheral stumps from uniting. After some weeks, or months, the peripheral stump was freed and stimulated electrically. The muscles supplied by this peripheral stump reacted and with so slight a current that, when it was applied to the muscles themselves, it was not of sufficient strength to cause any reaction. Physiologically the peripheral nerve was not in connection with the rest of the nervous system. A careful dissection showed no anastomosis between the peripheral stump and other nerves which were in connection with the central nervous system. A microscopical examination of the peripheral stump showed regenerated nerve fibres (axis cylinders and myeline sheaths). This same condition was found when the central portion of the sciatic, together with its spinal ganglion, was torn out completely from the spinal cord. It is difficult, of course, to decide upon the actual value of this experiment, chiefly because added proof from similar experiments made by others seems at present to be lacking. Munzer, a staunch upholder of the neurone theory, was not able to corroborate Bethe's results, though following in the main his procedure. The question seems at present to be undecided, with the evidence certainly in favor of Bethe's assumption, for the reason that one positive proof is of greater weight than many negative refutations. It is to be noted in this connection that Bethe seems to be adding to the force of his denial of the correctness of the neurone theory by a series of experiments, every one of which seems to be a logical development of his ground principle, which depends upon the assertion that the nervous system is not composed of a chain of anatomical units, but is made up of a system of continuous fibrillæ. This last, that of the autogenetic regeneration of nerves, appears to be the most convincing of all his experiments.

THE TREATMENT OF SCARLET WITH A SPECIAL ANTISTREPTOCOCCIC SERUM.

Working on the hypothesis that the specific cause of scarlet belongs to the streptococcus group, several observers have been using antitoxic sera prepared by injecting horses with live cultures of streptococci obtained from scarlet fever patients.

Baginsky and Summerfield, in Berlin, and Moser, of Vienna, have produced sera and tried their effects in series of cases. At the meeting of the German Medical Association in Carlsbad last summer both reported results, Moser being much more enthusiastic than Baginsky. Elsewhere in this issue will be found an abstract of Moser's paper which has just appeared. Examination of his figures shows that sixteen of eighty-four cases injected died, though it is to be remembered that only the severer cases were injected. It will be noted that Moser injects 180 c. c. of serum and repeats this dose if necessary. Although he does not think that any harm to his patients has come from the introduction of such large quantities of serum, it is questionable whether such procedure is free from danger. In the last volume (No. 35) of the *Archiv fuer Kinderheilk.*, Monti, of Vienna, has an article on serum exanthems, in which he raises the question, believing that the intoxications following the use of all sera are to be explained by the introduction of a foreign proteid containing animal serum. If this be true, the danger must certainly be greater from the use of 180 c. c., which Moser uses, than from the 5 c. c. used ordinarily in diphtheritic antitoxin injections.

Evidently the question of serum treatment of scarlet is not settled as yet, though these attempts form a valuable contribution toward advance in the treatment of this disease.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

Symptomatology of a Case of Tuberculosis of the Lymph Glands Resembling Pseudo-leukemia.—SCHUR (*Wiener Klinische Wochenschrift*, January 29, 1903) reports a case which the autopsy showed to be tuberculosis involving the lymphatic system, but which clinically greatly resembled a pseudo-leukemia. The enlarged lymph nodes in the cervical region presented the first indication of the disease; this was followed by fever, an enormous leucocytosis, etc. The fever, while not characteristic of pseudo-leukemia, has been noted in isolated cases. No definite explanation could be offered for the marked leucocytosis, reaching 60,000, excepting a number of miliary abscesses found in the cortex of the kidney. It is hardly probable, however, that they could had called forth such a decided reaction. The writer considers this one of those cases of gland tuberculosis presenting certain characteristics of pseudo leukemia.

Concerning the Regulation of Exercise in the Treatment of Tuberculosis.—PENZOLT (*Muenchener Medicinische Wochenschrift*, January 6, 1903) discusses in this article the question of rest and exercise in tuberculosis, and shows the importance of well-defined rules as to the rest demanded and the exercise allowed in these cases. He maintains that in doubtful cases too much rest does less harm than too much exercise. As soon as the rectal temperature reaches 38° C. the patient should be treated in bed, and after every acute process (such as hemoptysis, exudative pleurisy, etc.) the patient should be put to bed for two months, avoiding every unnecessary movement.

He recommends that the temperature, taken by rectum, be made the criterion in every case. The temperature should be taken every time the patient exercises, and if it goes above 38° C. it is an indication that the exercise was a bit too severe.

Investigations Concerning the Ports of Entrance for Tuberculosis in the Pharynx.—ITO, Japan (*Berliner Klinische Wochenscrift*, January 12, 1903).—Inasmuch as lymphoid tissues are peculiarly susceptible to infections with tuberculosis, the writer carried out thorough systematic investigations concerning the primary involvement of these tissues, which abound in the pharynx. To this end the base of the tongue and the lingual and palatal tonsils were examined in autopsies of one hundred and four children under thirteen years. The diagnosis of tuberculosis in these organs was based upon microscopic examinations only. Statistics based upon his negative findings and the investigations of others, show that the palatal tonsils were primarily involved in about 2 per cent. of the cases examined, the pharyngeal tonsils in about 3.5 per cent., and the lingual tonsil never. In no case have the valleculæ epiglotticæ been found involved, primarily or secondarily. In not one of the one hundred and four cases examined by the writer were the palatal, pharyngeal or the lingual tonsils, the mucous glands of the tongue or the valleculæ epiglotticæ found primarily involved. Secondarily, however, the palatal tonsils were involved in five cases, the pharyngeal tonsils in two, the valleculæ epiglotticæ in one, and the mucous glands of the tongue in one.

Observations Concerning the Percussion of the Apex of the Lungs According to Kroenig.—Wolff (*Deutsche Medicinische Wochenschrift*, February 5, 1903).—The early diagnosis of pulmonary tuberculosis, leaving out of consideration the tuberculin reaction, must be made by means of the physical examination. In the strict sense, the bacteriologic examination of the sputum is not a means of early diagnosis, since ulcerative processes are necessary to the appearance of the bacilli in sputum. The author recommends a modification of Kroenig's "topographic percussion of the apices of the lungs." The latter lays great stress upon the formation of the boundaries of the apex of the lungs—"lungen spitzenlinien." The writer points out the importance of well-defined boundaries, and therefore recommends the measurements, under careful percussion, of the so-called apical isthmus ("spitzen-isthmus"). By this is understood the expression in centimeters of the area of resonance, about one centimeter under the edge of the trapezius muscle and three centimeters above the clavicle. Under nomal circumstances this area has a diameter of four centimeters. Any marked variation in this diameter of either side would indicate either an infiltration or a retraction. The method requires very light percussion with a plessimeter adapted to the purpose, or with the fingers held parallel to the supposed apex.

Albuminous Expectoration Following Thoracentesis, with Report of a Case.—Allen (*Johns Hopkins Hospital Bulletin*, January, 1903) reports a case of this rare complication following thoracentesis, occurring at Johns Hopkins Hospital. Immediately following the operation, 3100 c.c. of fluid being withdrawn, the patient began to complain of shortness of breath and smothering sensations. This was soon followed by paroxysms of coughing and the profuse expectoration of serous frothy sputum. The expectoration continued for several hours. Recovery was complete. These cases may be divided into mild, severe and grave forms. The character of the expectoration is the same in all. The fluid is frothy, viscid, and of a greenish color. Upon standing it separates into three layers. It yields an abundant precipitate of albumen. The expectoration may begin before the tapping is complete, but most often begins from five minutes to two hours afterwards. Though the fluid greatly resembles the pleuritic fluid, it is hardly probable that these cases are due to perforations of the lungs by the trocar, for no such condition has ever been demonstrated in the autopsy of these cases.

The quantity of expectorated fluid is much larger than could be accounted for by a spontaneous perforation of the lung. Some have thought this phenomenon due to the reabsorption of the fluid remaining after thoracentesis and its discharge through the pulmonary vesicles and bronchi. This, however, is contrary to the teachings of physiology; the natural path for the absorbed fluid would be into the lymphatics, and thence into the general circulation. Acute edema of the lung is the most logical explanation. This view is supported both by the clinical symptoms, physical signs, and post-mortem findings.

The Pathology and Therapy of Asthma.—Sihe (*Wiener Klinische Wochenschrift*, January 22, 1903) presents an exhaustive consideration of asthma, in which he maintains that it is a neurosis of the respiratory and circulatory tracts. Four factors stand out pre-eminently in this connection: (1) Hypertonia of the unstriated muscle fibers of the respiratory tubes; (2) hypotonia of the circulatory system; (3) bronchial secretion brought about through nervous influences; and (4) hyperemia of the mucous membrane of the entire respiratory tract. These four factors can be stimulated through three sources, viz.: the peripheral nervous system, irritants circulating in the blood, and through the cerebrum. The author speaks, therefore, of a peripheral, a hematogenic, and a cerebral asthma.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Personal Experiences in Cancer of the Intestine.—(*Archiv fuer Klin. Chirur.*, Band 69, Heft i. and ii.)—Articles on this subject from the pen of this distinguished writer are most eagerly read and appreciated by the surgical profession. In the last eleven years he has operated upon one hundred and six malignant tumors of the intestine, the rectum excepted. Of the one hundred where cancer was the disease the growth was in the small intestine only five times, showing conclusively how rarely one may expect this portion of the bowel to be the seat of such disease under ordinary circumstances. The author writes that one must always suspect malignant disease whenever the intestinal functions of an old person, who has been healthy otherwise, suddenly become disturbed, especially if symptoms of stenosis make their appearance, whether a tumor can be felt or not. Where the trouble is chronic, the patient is generally in good enough condition for radical operation, but the prognosis becomes entirely different when we have to do with a case complicated by an acute obstruction. Here only a few patients are ever able to stand such a procedure. The three who were operated on by the author, with all his skill in this line, died. Under such circumstances as those just mentioned it becomes readily apparent that we had better often make use of an operation in two sittings; and indeed the author's experience has shown that his double operation has a mortality of only 12.5 per cent., whereas the operation in one sitting has a mortality of 42.9 per cent. under given circumstances. Again, the danger of peritonitis is much greater in the single than the double operation. And so this has become a routine practice with Mikulicz during the last five years. His idea is to loosen the mesenteric attachment and bring the tumor up on to the abdominal wall, where it is removed at the operator's pleasure and an artificial anus left.

Through-and-Through Intestinal Suture, with Report of Additional Cases.—F. GREGORY CONNELL (*American Medicine*, January 24, 1903).—This author, who is well-known for his admirable suture with the knot in the lumin of the bowel, presents another paper which is an amplification of the one which appeared in October, 1901, and introduced his method to the public notice. The present article reviews the history of intestinal surgery, more especially that of the suture which includes all the coats; at the same time the Connell procedure is explained at full length. This latter is well known, it would seem, but on account of its evident value the main details are here reproduced for the benefit of those who may not have seen it. It consists of a row of through-and-through sutures, the knot being placed within the lumin after the needle has returned to the interior of the bowel from which it originally carried the thread. Only one row of silk is used, there being no separate stitches for the peritoneum. The first stitch of all includes the mesentery and renders this difficult and delicate matter more secure than does any other of which the reviewer is informed. The last suture is hard to introduce, but when in place is certainly a secure finish for a rapid and safe anastomosis. The method has now been used sixty-four times, and out of all these patients but twenty-one died, there being in but one case any proof found at the autopsy to show that this procedure had been at fault; in the one case mentioned, the bowel wall was tuberculous, it must be said. For complete details of the method one is referred to the original article as well as to the *Journal of the American Medical Association*, October 12, 1901.

A Case of Arterio-venous Anastomosis for Arteritis Obliterans.—Gallois et Pinatelle (*Revue de Chirurgie*, February, 1903).—This interesting and novel operation was performed in a case where gangrene had caused the loss of one leg, and was already threatening the vitality of the other. Preliminary hemostasis was assured by placing silk temporary ligatures around the artery and vein within the limits of scarpa's triangle. After a long suture which united the adventitious coats of the two vessels a longitudinal opening was made in each, when by a second row of sutures the inner coats of the two were united, in very much the same way that a lateral intestinal anastomosis is often made. Next a third row of stitches joined the adventitia in front, and the work was complete. No pulsation appeared in the vein, though the same had been confidently expected. The gangrene progressed up the leg as though nothing had been done to arrest it, and a few days later the patient died with the symptoms of a cerebral embolism. At the autopsy the common iliac was found obliterated on the side of the amputation, while on that of the anastomosis the femoral was affected in the same way, below the anastomosis and the vein as well, thus making the new opening useless though it was found to be patent; hence, the operation was in no way to blame for the imperfect result. (Judging from the anatomical result in this case, it would seem that something might be expected from this ingenious French operation in a more favorable case.—*Rev.*)

What Are the Prospects of the Patient Who Has Been Operated Upon for Cancer of the Breast, After Involvement of the Supra-clavicular Lymphatics Has Become Apparent?—Kuettner (*Beitraege zur Klinischen Chirurgie*, Band xxxvi, Heft 2).—The material of the clinic at Tuebingin is peculiarly adapted for the compilation of such a statistic as follows because the patients come from so small a district that their movements can be followed as long as desired; in the present instance, the surgeon did not lose sight of a single patient operated upon. From 1880 to 1892 fifty-four such cases were operated upon, and of the number forty-one can be used in the manner desired; of this number it is sad to relate that not one is alive to-day, surely a mournful commentary on the procedure in question. Our author goes so far as to say, in view of what has gone before, that every case of cancer of the breast in which the supra-clavicular nodes can be felt, give an absolutely bad prognosis. He says further that the prophylactic excision of the lymphatics above the clavicle is not a justifiable procedure. It must be added that Kuettner does not advise simply letting the disease take its course in such cases; he is of the opinion that some sort of operation must often be done out of humanitarian considerations, to make the short remaining life of the patient more comfortable, just as a gastro-enterostomy does in cancer of the stomach where there is no chance of excising the diseased area in its entirety.

The General Consideration of Surgical Patients.—Ochsner (*The International Journal of Surgery*, Vol. 15, No. 12).—This experienced operator, and a man of clear judgment, says that he has seen patients lose their lives because the surgeon felt his duty to make a positive diagnosis. Especially is this true where portions of tumors are excised for diagnostic purposes. The pressure that is exercised in examining malignant growths often leads to a rapid spread of the same, which have until this time remained dormant for years. The exploring needle is often the instrument of excessive damage; either it fails to enter a pus cavity which is present, or it spreads along its track the infective material. Operations when the pulse is more than 120 are always dangerous. If an operation is done on an aged person, the patient must be allowed to get up at the earliest possible moment, and such people bear surgery fairly well provided the organs and vessels are in good condition. Infants are good subjects provided there be not too much blood lost, or the operation take too long. Fat individuals never stand surgery

as well as do those of less weight. It is difficult to say which is worse, the tendency to "insane haste" or that to "imbecile deliberaiton" which characterizes some clinics and hospitals. The article is replete with other suggestions of lesser weight.

The Oxygen-Chloroform Narcosis.—LAUENSTEIN (*Centralbl. fuer Chirurgie*, No.6, 1903).—The author has been using the Draeger-Roth apparatus in one hospital and the old method in another, having treated one hundred and twenty patients by each. He considers the new method of especial importance where one has to deal with those patients who are the subjects of alcohol. No accidents happened by the use of either method, though the author sees one point of advantage for the newer, in that the anesthetist has more time to watch the pulse, etc. Lauenstein has now returned to the old method, as must every careful worker, since the discovery by Michaelis of the fact that chloroform is decomposed by the contact with oxygen in the apparatus above mentioned.

An Operation for the Radical Cure of Aneurism, Based Upon Arterioraphy.—MATAS (*Annals of Surgery*, February, 1903).—Before any treatment of the aneurism can be thought of there must be some sort of preliminary hemostasis; this is accomplished by the author when he applies an Esmarch bandage, or by the use of Crile's forceps. When no pulsation can be felt longer the tumor is exposed and opened in its long axis. If the growth be of the fusiform variety the first step is to sew up the openings of the vessels which are tributary to it, after which the two parent vascular orifices are in like manner sewn shut with a single row of chromacised cat-gut stitches. If, however, the aneurism be of the sacular variety, then only its mouth is carefully sewn up in the manner just indicated in order that the lumin of the vessel from which it springs may not be encroached upon. All that now remains is now to rub the interior of the sack with gauze, that the endothelium may be made more ready to unite in the same manner that the peritoneum does after an abdominal operation. The author's experience reaches as far back as 1888 and covers four cases; the advantages which he has seen from the method are summed up by him as follows: there is less bleeding, less danger to surrounding structures, less technical difficulty, and less danger of gangrene (where an extremity is involved) than is the case in any other operative treatment of aneurism.

Inflammation of a Diverticulum of the Small Intestine, Simulating Appendicitis.—WALTHER (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome xxix, No. 3).—The patient was a female of twenty-five years, who had been taken acutely with all the symptoms which commonly characterize an appendicitis. The little organ was removed and showed no change except that of an folliculitis chronica. However, there was found at the same time a diverticulum eight cm. long, which was firmly attached to the right tube, and showed acute inflammatory changes such as we are accustomed to see in the vermiform appendix. There was likewise a pathological condition present in the contiguous tissues. The author takes it for granted that there had been an infection by stagnation in this pouch which had led to all the clinical and anatomical changes that mark an appendicitis of the acute variety.

A Contribution to the Diagnostic Value of Leucocytosis in Appendicitis.—WASSERMANN (*Archiv fuer Klin. Chirur.*, Band 69, Heft i and ii).—It is often impossible to tell by any of the ordinary diagnostic means whether or not a case of appendicitis is best suited to surgical or expectant treatment, hence we appreciate the value of the blood count when we understand that it alone can point the proper course of procedure in almost all of these cases. When there are more than 25,000 leucocytes one is always justified in taking it for granted that there

is pus and that an operation should be performed; especially is this true if the number be on the increase. In the Munich clinic the author has been able to verify this in all cases. There has been no single case in which a high blood count has not led to the finding of pus, although in many there were no other symptoms to the operator. However, the reverse of this proposition cannot be considered strictly true, since in a number of cases the ordinary symptoms led to an operation where pus was discovered, although there had been no increase in the number of leucocytes. This is explained in one of two ways: either the patient was so exhausted that the organism could not respond and produce the unusual cells, or on the other hand the abscess was thoroughly encapsulated. The examination was never so conclusive when the abscess was situated in some other part of the body, showing that the appendiceal region has an especial tendency in this direction. In one case pus was found and a fecal concretion with its menace to health and life, even though there were absolutely no symptoms at the time of operation except as revealed by the blood count.

Volvulus of the Small Intestine.—VAUGHAN (*Journal of the Military Surgeons*, Vol. xi, No. 6).—The mortality of twisting of the entire mesentery is seventy six per cent., while the same lesion affecting only a part of the same gives, as might be expected, a much higher percentage of recoveries. The value of the time element in such cases is shown by the fact that all the patients who recovered were operated upon during the first forty-eight hours after the onset. Too much stress cannot be laid upon the idea of ascertaining in a given case the cause of the volvulus, whether or not a tumor, etc., be present, because if there be some such cause and the mass be straightened out without removing the cause the trouble will simply recur. To accomplish this desirable end it may often be necessary to remove all the bowels from the abdomen, but the danger of this procedure is often more than offset by the good which is done the patient in the end.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

CARL FISCH, M. D.

Specific Sera for the Human Placenta. — W. LIEPMANN (*Deutsche Med. Wochen.*, 1903, No. 5) reports the continuation of his experiments of producing a serum specific for the placental tissues. By immunizing rabbits against sterile emulsions of blood-free (?) placenta he obtained a serum which, in an emulsion of the placental tissue in salt solution, produced a precipitation. This result was seen also in fetal serum (from umbilical cord) and in retroplacental blood serum, but not in the serum of a not pregnant woman, or in other sera. These sera, after the addition of placental tissue, reacted, however. He concludes that from these experiments light may be obtained on the question of deportation of villi into the maternal organism during pregnancy and on its effect. (Although such a consequence may appear justified, it seems more likely that more conclusive results would be obtained by experiments on animals. The reaction, of course, cannot be considered as specific for placental cells, but simply for some substance contained in the fetus. That these precipitations would occur with the immune serum by other tissues of the fetus, or even with the blood, can hardly be doubted. We know already that the receptors and complements of mother and child are different from each other in a number of respects.) The remark that after placental injections sometimes albuminuria occurs, brings up the question of the much discussed albuminuria after diphtheria antitoxin admin-

istration. An analysis of this phenomenon would certainly show that the proteids excreted in these cases are heterogenous (horse) proteins which simply were not assimilated and therefore eliminated.

Epithelial Pearls in the Lingual Papillæ of Man and a Tumor Artificially Produced in the Papilla Vallata of the Rat.—Hermann Stahr (*Central. f. Patholog. Anatomie*, xiv. No. 1).—The conception that tumors can arise from cell complexes separated from their normal connections in the course of the development of the body begins more and more to gain ground. The efforts to demonstrate these hypothetical complexes have been in many cases successful, but the cases are rare where such groups of segregated cells could be interpreted as growing tumors. Schaffer, in 1897, in examining the papilla vallata of a young child, found here isolated epithelial pearls and even epithelial nests of cells with luxuriant proliferation, invading in a budding way the surrounding connective tissue, in other words, miniature carcinomata. Stahr describes the frequency of these pearls and adds another instance where, also, proliferative changes in them were observed. This reminds one of the miniature cancers that so often are seen in the mixed tumors of the parotis, tumors the fetal origin of which cannot be denied. That under normal conditions these almost regular occurrences are eliminated by retrogressive changes is not surprising. That the papillæ vallata are the seat of predilection for tumor formation Stahr tries to prove by the observation that in white rats fed on oats there is regularly found in the posterior portion of the upper surface of the tongue a massive tumor formation of the character of an epithelioma papillare (fibro-epithelial tumor of Ribbert). Gray rats never showed this and white rats fed on meat or bread do not develop it. Examination revealed that the irritation caused by the stiff hairs of the oat grains was the exciting cause that led to the formation of a typical tumor, although not a malignant one. It is of course not the specific form of irritation by these hairs, but the fact that here for the first time directly a connection between it and the tumor formation could be shown. In a circuitous way of reasoning this connection has for a long time been postulated and almost become an axiom for many new formations.

The Substances Artivating the Cobra Venom.—P. Kyes and H. Sachs (*Berl. Klin. Wochen.* 1903, Nos. 2 to 4).—After by the work of Flexner and Noguchi the amboceptor character of the snake venom was established, the investigations of Kyes seemed to indicate that besides by the naturally present complements these amboceptors were activated, too, by a peculiar form of complements present within the red blood corpuscles and for that reason called endocomplements. This conclusion was drawn from the observation that blood solutions in distilled water from animals, the sera of which normally do not furnish complement for the amboceptors, acted activating when brought in contact with the amboceptor. A closer study of this peculiar phenomenon showed that the assimilation of endocomplements was erroneous and that the hemolytic action of blood solutions was due to the lecithin present in the blood corpuscles. The inactivation of the blood solutions at 62° C. is brought about through a binding of the lecithin to hemoglobin at this temperature. The most interesting result of this research is that the quantitative relations between amboceptor and lecithin were found correspondent to those between amboceptor and complement. And the authors make it probable that the active group in this combination between lecithin and cobra venom is the fatty acid radical. The paper goes far to confirm the basis of Ehrlich's theory—the purely chemical nature of the hemolytic phenomena.

A New Method of Hemoalkalimetry and a New Hemoalkalimeter.—Arthur Dare (*Phila. Med. Journal*, January 17, 1903).—The study of the changes of the

alkalinity of the blood for practical purposes has so far been neglected on account of the uncertain methods used for this end. In a very ingenious way Dare has utilized the fact that the neutralization of a mixture of blood with water is reached at the moment when the oxyhemoglobin bands disappear from the spectrum. He has on this basis constructed a very convenient little apparatus, the description of which is given in the article, in which the neutralization is brought about by a solution of tartaric acid. The spectroscopic analysis is made by Browning's pocket spectroscope. In view of the uncertainty of the arbitrary indicators used in the methods so far employed, the small quantity of blood needed for the examination (20 cmm.) and the simplicity of the whole procedure, Dare's hemoalkalimeter may prove a valuable addition to our clinical armamentarium, as proved to be his hemoglobinometer. That in certain pathological conditions a decrease of alkalinity is a characteristic symptom is well known.

The Relations Between the Lymphatics and the Connective Tissue.—(*Bulletin Johns Hopkins Hosp.*, January, 1903).—It is yet the general conception, exposed in every text-book on histology, etc., that there exists a direct continuity between the lymphatics and the so-called tissue spaces. Although the opposition to this view dates back to Teichmann (1861), no altogether conclusive demonstration of the faultiness of this view has been made thus far. We know, it is true, from the classic work of Sabin that the lymphatic system in its totality is derived from the budding of the wall of the vein, but, histologically, the terminal endings of the lymphatic vessels and their intactness has not been within the reach of our methods. McCallum in this paper shows by silver injections into the skin of young pig's embryos, that the endings of the finest lymph ducts are always surrounded by a distinct endothelial wall and are always closed so that there is no direct intercommunication between them and the spaces between the cells of the surrounding tissue. The lymph vessels grow exactly like the capillaries, by the sprouting and excavating of endothelial cells. There are no preformed stomata between these cells, just as little as between those of the capillaries. The appearance in the lymph glands of granular material introduced into the tissues is not due to a direct migration of these substances, but in all cases brought about through the action of cells called phagocytes, of which we have long known that they can penetrate intact endothelial walls. With this demonstration a great number of physiologic and pathologic problems appear in an entirely different light.

About the Immunization of the Typhoid Bacillus Against Specific Agglutinins.—(*Muenchener Medicin. Wochen.*, 1903, No. 2.)—The idea to which Welch in his latest Huxley lecture referred and which dealt with the probability that in the fight between pathogenic organisms and the human or animal body, not only the latter, but also the bacterium had to resort to protective measures, is not new, and has in a certain way already been announced by Meschnikoff. Experimentation in this line has so far hardly been attempted (with the exception of Ainley). P. Theod. Mueller undertook the study of the influence of an immune serum on the agglutination of typhoid bacilli. A race of this bacterium was, in parallel series, through a great number of generations, cultivated in bouillon and immune serum solutions. Without entering into the details, the result was that the serum bacilli lost a great deal of their agglutinability and also of their quality of producing agglutinin-binding complexes. This means that instead of a protective increase of the affected receptors their decrease or disappearance was the consequence. Similar phenomena have been observed in the blood corpuscles of animals immunized against the toxin of eel's blood. Aside from the theoretic interest of these experiments they have a practical bearing. It is a fact that a typhoid fever patient's own bacilli sometimes react only slightly or not at all to the action of an agglutinating serum, for the reason that, like in the author's

experiments, they have been exposed in the human body through endless generations to the action of the agglutinin and have lost the specific receptors. It seems, therefore, that a bacillus, isolated from such a case, should not without longer observation, on account of its negative reaction, be designated as non-typhoid.

Some Words About the So-called Physiologic Salt Solution.—Fr. Engelmann (*Deutsche Medic. Wochen.*, 1903, No. 4) calls attention to the inexactness with which the solution is used. The directions for its composition vary from 0.5 to 0.9 per cent. It is established that a physiologic solution as such does not exist and that the solutions agreeing in their isotonicity with the blood plasm of different animals vary considerably. While 0.65 per cent. solution is isososmotic for a frog, it is hypotonic for man and causes intense enlargement of the blood corpuscles and beginning hemolysis. Each solution should be called physiologic only for the organism for which it is made isososmotic. The physiologic salt solution for man has to contain 0.85 to 0.9 per cent. of sodium chloride.

A Study of the Reticular Supporting Network in Malignant Growths.—P. G. Woolley (*Bulletin Johns Hopkins Hosp.*, January, 1903) reports the results of his work on this subject, for which he used the Mallory connective tissue stain with a slight modification that, as the reviewer can say, is very valuable. Groups of cancer cells are always sharply differentiated from the surrounding tissue, no fibers penetrating into them. In sarcoma the borderline is not defined and connective tissue elements can always be demonstrated between the sarcoma cells. The same obtains for endothelioma, although in a lesser degree, thus confirming the close relation of these cells to the mesodermic tissues. But for the latter point that is, however, subject to discussion, Woolley's report brings nothing new; its merit lies in the application of a method that *a priori* adapted for this purpose had not been utilized for it. It may be that by this method the number of alveolar sarcomata will be still more reduced than it already is.

The Question of the Inclusions In and Between Carcinoma Cells.—W. N. Klimenko (*Central. f. Path. Anatomie*, Vol. 13, No. 21).—The paper is essentially a control investigation of the assertions made by Feinberg on certain findings in cancer tissue that he tries to prove identical with protozoic structures. Based on the same method, Klimenko has gone over the subject thoroughly and proves conclusively that none of the assertions of Feinberg are correct and that after his method nothing can be found not explainable in the line of nuclear or protoplasmic degeneration products. The paper is especially valuable because it frankly exposes the method of many investigators to identify, on the basis of morphologic or tinctorial similarity, structures that have nothing to do with each other. The famous bird's-eye appearance of the nuclei of certain protozoa (for instance the malarial parasite), that in the discussion of the German Cancer Commission plays such a great part, is to a degree simulated by certain degeneration products of cancer cells, and this forms the main stronghold of Feinberg, Leyden and others. Klimenko uncovers the essential difference between these formations. After all other attempts to demonstrate a cancer parasite have failed, it is fortunate that his research does away with this latest product, that in its conception bears the mark of unscientific thought.

Cultivation of Tubercle Bacilli from Sputum.—(*Zeit. fuer Hygiene u. Infec. Krankheiten*, Vol. 42, No. 1).—Not on account of the facility of the method this paper, by Carl Spengler, is mentioned here, but because it shows that accidentally it is often discovered where a curious mistake has been made. Tubercle bacilli in the numberless disinfection experiments have been always classed in their

susceptibility to succumb to the action of a disinfectant with other pathogenic bacteria (staphylococci, etc.). And now we learn from a man thoroughly trained and well known by many classical contributions, that tubercle bacilli withstand the action of formol widely longer than staphylococci and their company. Tubercle bacilli in sputum are not killed by a certain concentration of formol for many hours after all accompanying bacteria have been utterly destroyed. Aside from the practical bearing of this fact, on which naturally Spengler lays most stress, he has pressed it into service by using it for a very simple and convenient method for obtaining pure cultures from the tuberculous material. He exposes, for instance, thin layers of sputum in a closed Petri dish lined with filter paper to the action of a few drops of formol poured on the paper. After varying times (varying according to the amount of moisture in it) he removes portions of it to culture tubes and obtains a pure growth. The method is very ingenious and absolutely reliable; it will, for diagnostic purposes, replace the tedious and not altogether certain method of animal inoculation.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

The Salicylates in Acute Rheumatism.—H. W. SYERS (*Treatment*, January, 1903).—The writer, while admitting the strikingly good effect of salicylate medication on the pain of rheumatism, denies that it has any influence on the course of the disease itself. Its duration is in nowise shortened; the tendency to relapses or to the occurrence of complications such as endocarditis or pericarditis is not diminished. In this respect the alkaline treatment is to be preferred. The writer feels that except as regards our ability to relieve the pain of rheumatism, we are still as helpless in the treatment of the disease as we were half a century ago.

A New Kind of Diphtheria-serum.—A. WASSERMANN (*Deutsche Med. Wochenschr.*, 1902, No. 44).—Behring's diphtheria-serum is a pure antitoxin, which neutralizes the specific toxin of the diphtheria bacillus, but does not affect the bacilli themselves. Besides the true antitoxins, recent advances in bacteriology have made us acquainted with so-called bactericide sera which do not affect the toxins, but attack directly the bacteria themselves. Their chief properties are three: they kill and dissolve the bacteria; they produce the phenomenon of agglutination; they cause a precipitate in a solution of proteids extracted from the bodies of the bacteria. Wassermann has succeeded in obtaining such a bactericide immun-serum from diphtheria bacilli. Diphtheria bacilli were dried, pulverized, then extracted with a 1-1000 solution of ethylen-diamin and filtered. As this solution contains large quantities of diphtheria-toxin, it was necessary to neutralize it by means of a corresponding amount of diphtheria-antitoxin before it could be used for purposes of immunization. Animals were injected with slowly increasing quantities of this mixture. Their serum, if added to a clear extract of diphtheria bacilli, produced a flocculent precipitate such as never occurs when, to the extract of diphtheria bacilli, a normal or an antitoxic serum is added. It has thus been possible to obtain a new serum which, in distinction to the antitoxic sera hitherto known, contains a substance that is able to attack the bodies of the diphtheria bacilli themselves. While this serum will never replace the antitoxic serum, Wassermann believes it will be found useful in hastening the disappearance of diphtheria bacilli from the throat during conva-

lescence. As is well known, the persistence there of the bacilli now make a patient who has recovered from diphtheria a menace to the community for weeks after he is usually considered well.

Therapy and Pathogenesis of Angina Pectoris.—Robt. Breuer (*Muench. Med. Wochenschr.*, 1902, Nos. 39–41).—The theory of Potain and Huchard, according to which angina pectoris is due to a sudden ischemia of the coronary arteries, is now generally accepted. The ischemia is the prime cause of the attack; the pain and cardiac weakness are secondarily the results of the cardiac anemia.

The drugs used in the treatment of this affection may be divided into two groups: The first are those that are administered during the attack itself. These are narcotics, chief of which is morphine. The latter cannot be dispensed with during a severe attack. In the doses in which it is used for this purpose (0.01 g.–0.02 g.) it certainly is not a heart poison. Patients who die after an injection of morphine for angina, die in spite of the morphine rather than because of it. Besides morphine, the quickly acting nitrites, such as amyl nitrite, nitroglycerin, etc., are used. These combat the cardiac weakness, but are without influence upon the pain, the precordial anxiety or the duration of the attack.

The second group of drugs is used (in addition to hygienic precautions) with the object of preventing the recurrence of the attacks. For this purpose the more slowly acting nitrites, such as sodium nitrites, erythroltetranitrite, nitroglycerin, as also the iodides, are used. Some years ago Askanazy called attention to the value of theobromin in this connection, but without attracting much attention. The writer has tried this drug in the form of the well-known diuretin, and as the result of an experience extending over five years feels that he can entirely confirm Askanazy's findings. It is particularly in true angina pectoris, due to sclerosis of the coronary arteries and of the aorta, that diuretin shows its efficiency. It cannot be used to abort an attack since it is absorbed too slowly. As a prophylactic, however, it is usually superior to the nitrites. It always diminishes the frequency and severity of the attacks, and often entirely prevents their recurrence. Ordinarily it acts only while it is being taken; when it is discontinued, the attacks usually return. Exceptionally, however, its effects seem to have endured for days and weeks after its discontinuance. The other theobromin combinations, such as theobromin natriobenzoic, uropherin (theobr. lith. salicylic.), agurin (theobr. sod. acetic) and pure theobromin itself act in a similar fashion, but are not as efficient as diuretin. At first 3 g.–3.5 g. should be given daily; later the daily amount may be reduced to 2 g.–2.5 g. It is essential to distribute this quantity equably over the twenty-four hours, since many patients, if they are not given any of the drug during the night, have attacks then.

The writer reports a number of interesting cases, among them several of angina pectoris due to overindulgence in tobacco. In these cases diuretin proved itself particularly efficient. This speaks for the correctness of Huchard's view, according to which this form of angina is due to a spasm of the coronaries produced by the nicotine, and might thus be called a functional steno-cardia.

Of particular interest are the cases in which the angina appeared as severe gastric or intestinal colic. The prompt effect of diuretin in these cases speaks for the assumption that we have it here to do with a sclerosis, or a spasm of the intra-abdominal arteries.

For the very interesting discussion of the pathogenesis of steno-cardia and the allied affections, the reader must be referred to the original article.

The Use of Flowers of Sulphur in the Treatment of Typhoid Fever.—J. Woroschilsky (*Therap. Monatsh.*, 1902, No. 11).—A year ago Richmond called attention to the value of sulphur in the treatment of dysentery. The writer was able to confirm these results in a number of cases. The number of stools fell from

forty daily to ten or less, the tenesmus diminished and the stools took on a more nearly normal appearance. Encouraged by this result, he tried the same medication in typhoid fever. He prescribed sulf. depurat., 1.25 g. every two hours for adults; for children, 0.3 g.–0.5 g. at the same intervals. The former thus received about 10 g. daily, the latter 4 g. The drug is always borne well; does not produce diarrhea; on the contrary, diarrhea, if present, is relieved. After prolonged use, constipation is apt to occur, and must be combated by means of enemata. The drug was used in all stages of the disease, from the first to the third week. It invariably produced an amelioration of all the symptoms, in particular a gradual fall of temperature. In one case, in which, up to the seventeenth day, when the use of sulphur was begun, the patient had shown diarrhea, peritoneal irritation, high temperatures (104.5 degrees) and delirium, the use of the drug produced, after three days, an improvement of all the symptoms and a temperature of 102 degrees. Six days after the beginning of the treatment the patient had entered upon the stage of convalescence, with a normal temperature and a pulse of 80. Two other cases, in one of which the treatment was begun on the ninth day, in the other on the fifth day, showed analogous results. In a series of cases not reported in detail, equally satisfactory results were obtained. The drug should be given until all fever has disappeared. The writer explains the beneficial influence of sulphur in typhoid fever as follows: The insoluble sulphur covers the ulcers with a protective covering, and, perhaps, analogously to its action upon cutaneous ulcerations, causes a constriction of the vessels dilated by the inflammation, and possibly encourages epithelial proliferation. Moreover, to a certain extent, it has an antiseptic action. The writer is quite aware that typhoid is a general, not merely a local, infection; nevertheless, anything that influences the local disease favorably, cannot but have a good influence upon the progress of the disease. In severe septic forms not much good is to be expected from sulphur medication.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

A Contribution to the Natural History of Dysmenorrhea.—ERNEST HERMAN (*Jour. of Obstetr. of Brit. Emp.*, January, 1903).—In the author's opinion undue smallness and rigidity of the cervical canal is sometimes a condition underlying, and perhaps causing, spasmodic dysmenorrhea, acting not by causing mechanical obstruction, but by preventing a physiological dilatation of the canal during menstruation. The treatment of these patients consists in the dilatation of the cervical canal. The author bases his conclusion upon a study of sixty-seven cases of dysmenorrhea which were cured by the use of bougies. In forty-three of these patients the pain dated from the first menstruation. The result of this treatment is not materially affected by the length of time the dysmenorrhea has lasted. The diagnosis of spasmodic dysmenorrhea, *i. e.*, of the kind of menstrual pain that is cured by dilatation, can only be made by the character of the pain. The pain felt with menstruation may be of two kinds—a general aching due to the congestion of the pelvic organs, which *precedes* menstruation and is relieved by the bleeding from the uterus, and the sharp spasms of uterine colic. The former is not affected by dilatation, the latter is often cured by it. The pain of pelvic congestion is constant, that of uterine spasm intermittent, very severe, generally accompanied by nausea, and in one-fourth of the cases by vomiting.

The most obvious explanation for the cure of menstrual pain by dilatation of the cervical canal is that the pain was caused by a narrowness of the canal. But the cervix, if not narrow enough to mechanically hinder the outflow of blood, may yet be small and rigid, and not dilate as it should during menstruation; and it is possible that such deficient dilatation or dilatability may be the cause of such painful spasms.

Pathogenesis and Treatment of Dysmenorrhea.—MENDEZ DE LEON, Amsterdam (*Internat. Congress of Gynec., Rome*, 1902).—The mechanical theory of dysmenorrhea can be accepted only for a very small percentage of cases. The spasmodic pains are not due to an obstruction but to a general or partial contraction of the uterus. Out of one hundred and forty-seven patients who sought relief for menstrual pain, one hundred and twenty-eight offered the typical symptoms of endometritis. The spasmodic pain most frequently occurred during menstruation, often in the inter-menstrual period, in the presence of a copious mucous discharge. They could be artificially produced by touching the endometrium with a probe. In this class of cases, classified as endometritis dysmenorrhoica, by the author, the spasm originates from the irritating effect of a diseased endometrium. In fifteen patients the spasms were of a very severe type, usually accompanied by vomiting, headache, dizziness, even syncope. An uterine sound that could easily be introduced into the uterus in the inter-menstrual period, if introduced during menstruation met with an unyielding obstacle at the region of the internal os, produced by spastic contraction. The writer calls this form of dysmenorrhea, hysterospasmus. It is usually met with in the presence of some disturbance of the nervous system, as hysteria or neurasthenia. In his opinion, in these instances the uterine contractions during menstruation, which are not felt by healthy individuals, become painful on account of the increased sensibility of the patients. The writer believes in the existence of an ovarian dysmenorrhea. The treatment of the endometritis dysmenorrhoica consists in the treatment of the endometritis. The hysterospastic type of dysmenorrhea is cured by a wide dilatation of the cervical canal until a complete paresis of the internal orifice is procured. The writer uses a laminaria tent for the first twenty-four hours, and continues dilatation until a Hegar dilatator No. 18 or 20 can be introduced. Then for two months a dilatator No. 8 is introduced twice a week. If the pain returns the dilatation is repeated. The results with this mode of treatment were in the hands of the author very satisfactory.

On the Formation of Peritoneal Adhesions After Laparotomy.—PERNHORST (*Inaug. Dissert.;* rev. *Centralbl. f. Gyn.*, No. 6, 1903).—The following precautions are carefully observed in Werth's clinic in order to prevent the formation of peritoneal adhesions after abdominal operations: Every raw surface or stump is covered as well as possible with peritoneum; the peritoneum is closed in the incision in a special layer by means of a suture which turns the edge outward; the incision is made small in order to avoid infection from the air; before the laparotomy wound is closed some fluid is injected into the bladder. Pernhorst reports in this paper the results of these prophylactic measures, as observed in sixteen cases, either at the time of a second laparotomy or on the post-mortem table. There was a complete absence of adhesions in four instances. Adhesions were quite extensive in four cases, three times situated at the ligated stumps. The following mode of adhesion was found each in one case: between abdominal scar and intestines; between posterior wall of uterus and small intestines; between ovary and intestines; between fundus uteri and abdominal scar. If there was an elevation of temperature after operation, during the convalescence, adhesions always were present. The cause for the development of peritoneal adhesions is a localized inflammation which seems to be unavoidable even by the most painstaking aseptic precautions.

The Micro-organisms in the Vaginal Secretion of Pregnant Women.—H. BERGHOLM (*Archiv fuer Gyn.*, vol. lxvi, part 3).—The reaction of the vaginal secretion was found to be acid in every instance, the degree of acidity, however, was varying within wide limits. A division into healthy and pathological secretion from macroscopical aspects is not feasible. Most of the bacteria found are bacilli, the cocci being in the minority. Those usually met with in the vagina of the pregnant woman did not show any pathogenic effects upon animals. In no instance could be cultivated the staphylococcus pyogenes albus or aureus, or the streptococcus pyogenes, or bacterium coli. The bacteriological character of the vulvar secretion is considerably different from that of the vaginal, the former very frequently containing the staphylococcus cereus and bacterium coli.

Traumatic Keratitis in the Newborn.—THOMSON (*rev. Journ. of Obstetr. of Brit. Emp.*, February, 1903).—The author records three cases of keratitis in the newborn. In each instance there was a history of a difficult forceps delivery in a case of contracted pelvis, with some bruising of the upper eyelid and subconjunctival hemorrhage, the injury having apparently been caused by the forceps. The condition was noticed soon after birth; the cornea appeared hazy and opaque. In the course of three months the opacities underwent a remarkable change and a white linear scar was found extending almost vertically downward across the cornea. In one case seen a year after the injury the scar was still visible but rapidly disappearing.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Prognosis of Tuberculous Peritonitis in Children.—SUTHERLAND (*Archives of Pediatrics*, February, 1903) bases his remarks on forty-one carefully studied cases. The total mortality was 26.8 per cent. Comparing the results of medical and surgical treatment, he found that of twenty-seven cases treated medically, twenty-two, *i. e.*, 81.3 per cent., recovered; of fourteen cases treated surgically, seven, *i. e.*, 50 per cent., recovered.

He does not believe that the course of the disease is appreciably affected by simple laparotomy. His general conclusions are:

1. In uncomplicated cases, or cases complicated only by tuberculous pleurisy, the prognosis is favorable.

2. Unfavorable prognostic points are: (*a*) bad family history, (*b*) infancy passed under bad hygienic or dietetic conditions, or a history of severe infective illness in early life, (*c*) feeble constitution.

3. Unfavorable prognostic symptoms: Continuous pyrexia, rapid wasting, persistent diarrhea, rapid pulse, recurring exacerbations.

4. Unfavorable local complications: Tubercular ulceration of bowels, extensive caseation or suppuration of lymph nodes, obstructive symptoms from bands or matting of intestine.

5. Most unfavorable complications: Rupture of suppurating lymph node into peritoneal cavity, pulmonary tuberculosis, tuberculous meningitis, general miliary tuberculosis.

Serum Exanthems.—MONTI (*Archiv fuer Kinderheilk.*, Vol. 35, p. 390) discusses the cause of serum exanthems. He says that his own previous explanation, that the exanthems were streptococcus infections, is certainly not true. Nor can the small amount of carbolic acid in some of the sera explain the eruptions,

seeing that they have followed the administration of sera which contained no carbolic acid.

The correct explanation was first given by Oertel, namely, that the exanthem is the expression of an intoxication due to the injection of a proteid containing fluid (blood serum) of an animal of different species. Johannesen confirmed this theory by injecting simple sterile horse blood serum into twenty-two children. In twelve of these he produced exanthemata of various kinds. Monti has made a series of similar experiments. He found that he was able to produce intoxications, with constitutional symptoms and eruption, by injecting comparatively large quantities of horse serum. He found that a distinct relation existed between the amount of serum injected and the onset of symptoms; the larger the amount, the more often its injection was repeated, the greater the reaction. It is noteworthy that since the introduction of the concentrated sera, up to eight hundred or one thousand units per c. c., the serum exanthems have diminished decidedly. This is to be explained by the smaller amount of serum necessary to get the same antitoxic action, which formerly required ten or more c. c.

Heroin in Diseases of Children.—PRICE (*Philadelphia Medical Journal*, February 14, 1903) considers heroin of great value where antispasmodic and sedative medication is required in childhood. He has used it with much success in cases of bronchitis, pertussis, false croup, convulsions from intestinal disturbances, incontinence of urine, chorea and asthma. He prefers the hydrochloride to the alkaloid itself, and his dose is one-two hundred and fortieth of a grain for a child a year old; dose for other ages in proportion. He has seen no untoward effects following its use, it has no cumlative action in the system, and it is compatible with expectorants and with other antispasmodic and sedative remedies.

Antipyresis in Children.—SAUNDERS (*Pediatrics*, January, 1903) believes that no method of antipyresis should be used for children to the exclusion of all others. While hydrotherapy should take first place, he finds that it often may be combined with other measures to advantage. The analgesic effect of the coal-tar products makes them very valuable, and when properly used they are free from danger.

In the early stages of scarlet and other exanthemata the combination of phenacetine and camphor is often very useful. Pilocarpine is both an eliminant and antipyretic in diphtheria and scarlet. When the fever is very high, hydrotherapeutic measures may be instituted in addition.

In pneumonia veratrum viride is a valuable antipyretic, and, when cautiously used, perfectly safe.

The external application of guaiacol also acts well, especially in typhoid and tuberculosis. With care in its use there is little danger of depression, but the dose must be small, one to three or four drops being the dose for infants.

Of the hydrotherapeutic measures, the author considers the wet pack the most generally serviceable.

Treatment of Scarlet with Scarlet-Streptococcic Serum.—MOSER (*Jahrbuch fuer Kinderheilk.*, Vol. 57, January, 1903) reports the results of his work with a scarlet-streptococcic serum during the past few years. He regards it as probable that the specific germ of scarlet belongs to the streptococcus group, although he does not think that this fact has been definitely established as yet. He has succeeded in obtaining pure cultures of streptococcus from the heart cavities just after death in sixty-three out of ninety-nine cases. Twice he obtained growths from the cerebro-spinal fluid intra vitam. Although the germs were not pathogenic for small animals usually used for experimentation, he found that injection into horses caused local infiltration and rise of temperature. He, therefore, proceeded to immunize horses systematically. The horses were treated with a mixt-

ure of live cultures of streptococci, grown from the blood of scarlet fever patients. These cultures, often as many as ten different ones, were injected in increasing doses, at first intravenously, later subcutaneously. After having continued the process of immunization for months, the horses were bled, and the serum, without addition of carbolic acid, used for therapeutic work. The attempt was made to use the serum on the severer cases, and the injections were made as early as possible. The results showed that the best results were obtained when the injections were made very early.

The general symptoms were favorably influenced by the serum, and it was noted that the percentage of certain complications, nephritis, sepsis, etc., was smaller.

Very large quantities of serum (180 c. c.) were injected, and this dose sometimes repeated. According to Moser, bad effects, that is serious ones, did not follow the use of these large doses.

Eighty-four cases have been injected; of these, sixteen died, a mortality of 19 per cent. It is, of course, to be remembered that only the severest cases were injected, as a rule. The total number of cases of scarlet admitted in 1901 was three hundred and eighty-nine, with thirty-five deaths, a mortality of 8.9 per cent.

The Effects of Tight Diapers.—Cotton (*Archives of Pediatrics*, February, 1903) believes that improper clothing may interefere with growth by impairment of function, and may also cause actual deformity by compression upon plastic tissues in their formative periods. He shows by skiagrams the compression of the pelvis that results from the pinning of diapers of unyielding material too firmly around the hips of a young infant, and believes that such compression continued over a long period of time might lead to retardation of pelvic development.

He also thinks that the thorax may be restricted in growth by prolonged compression.

The practice of wadding a large amount of inelastic diaper material between the thighs is also to be condemned, and the author thinks that many cases of genu valgum have their origin in this cause.

To obviate these dangers the diaper should be light, made of absorbent cotton covered with cheese cloth.

The clothing of the infant should be arranged to be supported from the shoulders, doing away with binders. Knitted, seamless underclothing, without seam or band, and sleeveless slips, are allowable.

NEUROLOGY.

IN CHARGE OF

Sidney I. Schwab, M. D.

Late Appearing Hysterical Attacks in Epilepsy.—J. S. Hermann (*Monatschrift fuer Psychiatrie u. Neurologie*, No. 1, 1903).—Two cases of epilepsy are described in which, at a very late stage of the disease, rare and peculiar hysterical symptoms developed. The first patient suffured from epilepsy for twenty-the second for eighteen years, before the first symptoms of hysteria appeared. In both patients the hysterical attacks preceded the epileptic by a few days; they were never coincident. In one case no prodromata were to be observed, while in the other, before the hysterical attack, headache and general malaise formed a definite prodroma. In both cases the hysterical attack was of the grand

type. In the first case the chief symptoms were contractures of all four extremities, aphasia and analgesia distributed in very typical areas. In the second case, mutism, persisting at times for two weeks, and cataleptic attacks were the prominent symptoms. In considering the question of etiology, the author is inclined to believe that, together with the natural hereditary tendency, the presence of epilepsy itself was the most prominent factor in the causation of the hysteria. This is very probable on account of the absence of any definite factors other than these for the causation of the late appearing hysteria.

A Study of the Modes of Onset in Eighty Cases of Disseminated Sclerosis.—MACKINTOSH (*Rev. of Neurology and Psychiatry*, Vol. i, No. 2, 1903).—On account of the difficulty of diagnosing multiple sclerosis in its early stages, a study of the modes of onset, noted in a large series of cases, should be interesting and of considerable practical value. This difficulty of early diagnosis is due, mainly, to two facts: first, that the modes of onset are so many and so varied, and often so similar to the symptom complex of other recognized diseases, and second, that the disease may run its course for months or years before any of the so-called cardinal symptoms appear, if ever they do manifest themselves. This paper is based upon a series of eighty cases, a very large number when it is considered that only such were included as exhibited some of the so-called classic symptoms, such as tremor of the arms in 83 per cent., nystagmus in 81 per cent., optic atrophy in 47, and scanning speech in 20 per cent. The earliest symptoms noted in this series were as follows: Motor paresis in forty-five cases, sensory symptoms in twenty-nine, ataxia or tremor in twenty, sphincteric troubles in five, apoplectiform attacks in three cases, cerebral symptoms of various sorts in nineteen cases. The foregoing analysis brings out the following points: (1) The extraordinary variability of the modes of onset. (2) The comparatively large number of cases with acute or sudden onset. (3) The frequent occurrence of purely unilateral symptoms. (4) The comparative frequency of the occurrence of sensory symptoms, either alone or combined with other symptoms.

On the Motor Cortex.—CLARENCE B. FARRAR (*Am. Jour. of Insanity*, No. 3, 1903).—This paper treats of cerebral localization in the light of some of the most recent work on the subject. The existence of a motor cortex and of a specific anatomical structure of the same are considered as facts. A careful analysis of the literature on the subject is given, with an especially clear exposition of the theories of Flesehig. For this reason, if for no other, this paper is of value. The following is a resume of the author's conclusions: The motor cortex occupies the middle region of the hemispheres, intermediate between the general and special sensory areas on the one side, and the specific association or psychic center on the other. This zone is the earliest to functionate and the central sulcus forms to give increased room for its developing elements. Beginning with the observations of Hitzig, that the motor area embraced nearly one-half of the brain surface, its confines have gradually become narrowed. It has long been assumed roughly to include both central convolutions and the paracentral. Fleschig discovered embryologic differences which he believed justified him in considering the post-central the seat of general incoming sensory impulses and the adjoining precentral the seat of outgoing motor impulses. That a motor type of cortex exists is abundantly proved. It is characterized by its usual width, dependent upon the marked development of the medium size pyramidal cell layer, containing the specific plexus of Cajal, by the absence of a clearly defined granular zone, and by the presence of giant cells in the sixth layer with thicker and denser radial bundles and a richer development of the overlying tangential fibers, which are of maximum density.

The Action of Hedonal on Animals.—Lampsakow (*Neurolog. Centralbl.*, No. 2, 1903).—Hedonal is the complex organic substance of the ethyl group, derived from the urethan series by replacing it by a higher alcoholic radical. From a large number of experiments on various animals of different species the author draws the following conclusions: (1) Hedonal is a powerful and harmless hypnotic. (2) It is four times as active as urethan and possesses the good qualities of the ethyl group without disturbances of the circulation or respiration. (3) Hedonal can be used in large quantities for narcosis in many physiological operations and in small quantities before the beginning of a chloroform narcosis, with the object of making the latter easier. (4) In anemia and in weak individuals, as well as in those who suffer from various heart affections, hedonal can be considered a safer hypnotic than chloral. (5) Hedonal can be given internally or per rectum, but not subcutaneously.

The dose for human beings is from 0.05 to 1.0 gram.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. Johnson, M. D.

A Cystoscopic Demonstration Apparatus.—Kutner and Koehler (*Centralblatt f. d. Krank. d. Harn - und Sex. Org.*, January, 1903).—Recognizing the difficulty of demonstrating to another a cystoscopic view, the authors present an apparatus which may be attached to any cystoscope by means of which one can see the same cystoscopic picture at the same time as the operator. Owing to the difficulty of holding the cystoscope steady, and to the movements of the patient and his bladder, it is not an easy task with the ordinary cystoscope to show a certain bladder picture. The attachment consists of two telescopic tubes joined at right angles, and is attached to the cystoscope so that one tube is in the same axis as the cystoscope, through which the operator looks, while the student looks through the other tube at right angles to that which the operator uses. By a system of lenses both see the same object.

Uretero-Cystostomy, With Traction on the Ureter.—Smith (*Northwest Medicine*, February, 1903).—In order to secure firm union between the bladder and ureter in uretero-cystostomy where there is loss of ureteral substance, and traction upon the ureter is necessary, the author proposes an operation which he has found satisfactory for this purpose through experimentation upon dogs. He demonstrates that a suture passed through the entire wall of the ureter will withstand much more traction than if only the muscles are included, and that the danger of calculous formation about such a suture is theoretical rather than practical. The operation he employs is an oblique implantation of the ureter into the bladder by his own technique, which is fully described.

In a series of experiments in which he exsected a portion of the ureter, and thus made a uretero-cystostomy, he obtained secure union between the ureter and bladder under a very great degree of tension. But, in nearly all, some degree of interstitial nephritis of less degree was also found in the other kidney. In order to determine whether traction on the ureter was responsible for these results, he undertook a second series of experiments, in which the ureter was simply severed at its normal site and implanted at the fundus without loss of substance, with practically the same unfavorable results in the kidney. This seems to exclude traction on the ureter as the sole cause of the kidney affection. He suggests the severing of the vessel and nerve supply to the ureter as a probable causal factor.

Judging from these experimental results, he is led to speculate whether in operations on man reported as successful there may not have ensued a subsequent nephritis and atrophy of the kidneys on the side of the operation, unknown to operator or patient.

On the Value to the Surgeon of Some Modern Methods of Renal Diagnosis.—Bryson (*Med. Bul. Wash. Univ.*, January, 1903).—When used in conjunction with the cystoscope, and according to his technique, the author finds the Harris segregator of distinct value in the investigation of reno-ureteral as distinguished from vesical cases, and even in the differentiation of renal from abdominal tumors.

After discussing cryoscopy and the phloridzin test and quoting cases in illustration, these deductions are given:

First.—The fact that hematocryoscopy requires the withdrawal of about 25 c. c. of blood, limits the clinical application of this test somewhat, and its value has not yet been demonstrated.

Second.—Urinocryoscopy, in association with the separation of the urines, is of distinct value, especially in connection with hematocryoscopy.

Third.—The phloridzin test is a very delicate and valuable one for investigation of the functional capacity of the kidney.

Fourth.—The phloridzin test is not difficult of application, and should be made whenever possible before doing an operation on the kidney.

Fifth.—Until further observations the freezing and phloridzin tests should be made separately. The polyuria, often caused by injection of phloridzin, may modify the freezing point of the urine from the healthy kidney.

Sixth.—These tests should be regarded only as aids to diagnosis, and as in no way taking the place of well-established means of clinical reckoning.

The Value of Linear Electrolysis in the Treatment of Strictures of the Urethra.—Moran (*Ann. des. Mal. des. Org. Genito-Urin.*, January, 1903).—With an unprejudiced mind the author has undertaken, through experiment, to judge of the value of linear electrolysis as a treatment for strictures of the urethra, being forcibly impressed by the marked divergence of opinion among authors as to its efficiency. If one attempts to treat all strictures by this method he will get into serious difficulties, especially with those so hard, long or tight as to demand either a considerably intense current, or much force brought to bear upon the instrument. The following technique is advised:

The urethral stricture should measure at least No. 10 (Charriere), if not, it should be dilated to this point. Use the usual cleansing precautions of the urethra and inject 1 per cent. sol. cocaine. Never employ a current of an intensity more than ten milliamperes. Never prolong the electrolytic action beyond some seconds, at most three minutes. Never force the instrument to penetrate into the urethra, but simply delicately guide it. Return the blade of the electrolyzer upon the wall opposite to that which has been electrolized as the instrument passed in, thus utilizing the electrolytic action upon both walls of the urethra, and thus increasing its favorable action. If the stricture remains resistant under these conditions, employ internal urethrotomy.

Electrolysis does not produce a radical and definite cure of the strictures, but is, indeed, a simple, easy, painless and almost bloodless method of enlarging certain strictures, but does not take the place of subsequent dilatation to prevent recontraction. We should then not promise absolute cure to the patient. With the author electrolysis has been done easily, without the least accident, without the slightest febrile reaction, even in cases with genito-urinary tuberculosis, and with infected prostatics. Its advantages over internal urethrotomy (more acceptable to the patient, absence of pain and hemorrhage, uselessness of lying in bed and of the *catheter a demeure*, absence of grave complications) will cause linear electrolysis to supplant internal urethrotomy in many circumstances.

The Treatment of Prostatic Hypertrophy.—SMITH (*Yale Med. Journal*, January, 1903).—A consideration in this article to be specially noted is the author's manner of dealing with that class of cases where the emergency of complete obstruction exists, where there is extreme cystitis, or where contraindications to general anesthesia are present. He employs the simple operation of external urethrotomy and drainage through the perineal incision, this being done under local anesthesia with but slight shock or hemorrhage. All of thirteen patients survived the operation, some of them in extremes from sepsis, with extravasation of blood and pus from a ruptured urethra, and even with sloughing scrotum and burrowing of pus up the inguinal canals.

Ureteritis in the Female.—GARCEAU (*Amer. J. Med. Sciences*, February, 1903).—This excellent article embraces practically all that is known of diseased conditions of the ureter and their treatment. The author considers the symptoms, methods of diagnosis and treatment of simple, obstructive and tubercular ureteritis. While he has nothing especially new to present, the twenty-six pages of the journal which he occupies, being more or less a compilation of what has been done in this line, is full worthy of the space it takes up. Particular attention may be called to the sixteen cases of total nephro-ureterectomy with one death only, which he has collected from literature. The results were most excellent.

Although a tuberculous ureter will sometimes atrophy, in view of the favorable results in total or partial nephro-ureterectomy here reported, it encourages the author to believe that in tuberculous conditions this operation will be more commonly done in the future.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Dermatitis Coccidioides.—D. W. MONTGOMERY, M. D., H. A. L., RYFKOGEL, M. D., and H. MORROW, M. D. (*The Journal of Cutaneous Diseases*, January, 1903).—Although Dr. Montgomery had previously seen three patients with this disease, he did not recognize it when he first saw this patient, indicating how widely clinical appearances vary in different cases.

The patient, fifty years old, born in Switzerland, had resided in San Francisco since seven years of age. He had never lived in the San Joaquin Valley, where three of the former patients seemed to have acquired the disease. The trouble began as a gradual enlargement of the left hand and forearm, seven years before. The next year the left leg and ankle began to enlarge. Four years thereafter there appeared an eruption on the chest, later upor the left hand and arm, neck, ears. Upon examination there was hypertrophy of the skin and subcutaneous tissue of left arm, hand, both legs and left foot. Over chest and abdomen pigmentations like that from lichen planus were distributed. On the left forearm and hand there was an eruption of papules, pustules and nodules, all discrete, but thickly placed. There was a pustular folliculitis of the neck so dense as to form a boggy mass. The right ear was tense and swollen and resembled an acute eczema. There was a superficial elephantiasis of the extremities involved and the skin was covered by capillary overgrowth with thickened horny layer. Patient died nine years after commencement of disease and two years after author's observation.

Post-mortem, the lungs showed in places miliary tubercles. Cultures from the diseased areas all grew a fungus which has a double cycle of growth, one in the tissues and one in culture media. In the tissue the organism takes the form of a sphere between three ½ m. and 5 m. The sphere is surrounded by a clear double contoured capsule, and in fresh specimens this outer capsule is covered with spines. The larger spheres are filled with granules or spores. No micropyle is seen in capsule, as in the coccidia.

In culture two or three mycelial threads spring from a moderate sized capsule which branch and form a mould fungus.

Inoculation into guinea-pigs proved fatal.

In the skin there was a slight hyperplasia of the rete with processes growing down into the corium. The corium had a diffuse cellular infiltration extending into subcutaneous tissue. Giant cells were occasionally found. The infiltration consisted of plasma cells and leucocytes. Abscesses in the rete so characteristic of blastomycosis was rarely found.

A Rare Seborrhoide of the Face.—J. J. PRINGLE (*Brit. Jour. of Dermatology*, February, 1903).—Pringle describes a rare clinical type of a seborrhoide of the face which, however, is familiar to us here in St. Louis, not only in the exact form described by the author, but of varied symptoms, taking the case in question as an example or type.

Dr. Pringle's case presented an obvious rosaceous condition and several telangiectasis. The characteristic feature is the presence of innumerable small, nodular prominences, which are superadded to the rosaceous condition and cover the whole face, as well as the contiguous part of the neck. They vary in size from a pin point to a split pea and are closely aggregated and contribute to the bright red color of the part. They are in myriads over the forehead, every follicle being apparently picked out by them and impart a sensation of roughness to the finger. Over the cheeks the lesions are larger and more sparse in distribution. They arise abruptly from the surface and are firm to the touch. Their rounded summits reflect light, giving them the appearance of vesicles. The majority are bright pink in color, but under pressure are gelatinous or colloid. Nowhere is there any comedo formation, pustules or vesicles, nor signs of atrophy or pitting. The scalp shows a slight dry seborrhea. There is no acne or sebaceous disorder of back or chest.

Microscopically the small elevations correspond to a pilosebaceous follicle. There are no plugs in the follicle, as in acne. The horny layer is normal and there is no acanthosis. Around the follicle and in the corresponding deeper parts there is an extensive infiltration of cells, consisting of mononuclear and polynuclear leucocytes and connective tissue corpuscles. No micro-organisms were found.

Histogenesis of Scales and Crusts.—R. SABOURAUD (*The Jour. of Cutaneous Diseases*, February, 1903).—The words scales and crusts are constantly used, yet how few physicians understand their structure and genesis. The usual idea of a scale is that it is the abnormal overproduction of the normally exfoliated layer of the epidermis. This is only a part of the truth, for the scale so defined is that of ichthyosis, rather a malformation than a disease. But to understand the scale it is necessary to understand the crust; the general idea of this is that it is formed from the effusion at the surface of fluid (serum) and its concretion externally. This elementary idea is wrong, as it is formed by keratinized layers of epidermis as well as the scale, besides containing other elements as serum, leucocytes, and maybe pus and extraneous matter; and scales are usually the product of both effusion and desquamation, and are scale-crusts.

It is interesting to study the mechanism by which the serous and leucocytic exudation is joined to the epidermic exfoliation to form the scale as well as the

crust: 1. Exocytosis, a transmigration of leucocytes through the entire thickness of the epidermis, which are poured out upon the skin at its surface or at the level of the horny layer. This occurs in diseases which dermatology in nowise classifies among the exudate diseases, and which are absolutely superficial under the microscope. This phenomena occurs especially in squamous states, but exists in the most superficial, ordinary and insignificant skin lesion, which is a fact new in dermatology, but has been known to constantly occur in all mucous membranes. This afflux of leucocytes to the surface, and which assists materially in the formation of the scale, is always seen in parasitic diseases and in traumatic conditions (mechanical and chemical) and in diseases in which no organism has been found; therefore the reasons for this exodus of leucocytes are not known. 2. Exoserose is the exudation through the epidermis and at its surface of a serous liquid coming from the derma. It is analogous to the "spongy state" of the epidermis described by Unna, and is connected strictly with vesiculation. But the particular state to which the writer calls attention is the accumulation of serum just under the horny layer, and there concretes into a coagulated, solid mass, which gives rise to various clinical and histological figures. It is difficult to explain the immediate cause of this phenomena, as it occurs in parasitic as well as non-parasitic skin diseases. 3. Hyperkeratosis is the skeleton or scaffolding for the formation of all scales and crusts. In studying a piece of skin the fact must be constantly kept in mind that all these cells, surprised and fixed in a moment of their activity, would not be found in the same places if the same piece should be taken a few hours later. Because the mass of epidermic cells are animated by a constant ascending movement. To-day exoserosis conducts the serum to the level of the corneous layer, to-morrow it will dry and form an elevation at the surface of the skin, the day after a new corneous layer will be formed under it and we should have a scale or a crust, composed in its center of a block of dry serum and above and below of epidermis.

The processes above described may be observed conjointly or one without the other.

LARYNGOLOGY AND OTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Collodion After Nose Operations.—PISCHEL (*Archives of Otology*, Vol. xxxi, No. 5).—The author, instead of packing the nose with gauze or other material to prevent hemorrhage after the removal of turbinal hypertrophies or other nose operations, drops collodion upon the wound, while an assistant blows compressed air into the nose to accelerate evaporation. All bleeding is first checked with adrenaline. The collodion must be dropped on the wound slowly and carefully so that it does not run down into the pharynx, which would make the patient gag and cough. The writer uses a small metal tube 9 cm. long and 1 mm. thick, with a tulip tip to which the bulb of an ordinary medicine dropper is attached. One filling of this bulb is usually sufficient. This collodion dressing was tried in thirty-one cases, and not in a single instance was there any hemorrhage, and caused no inconvenience to the patient.

The Significance of Snoring.—VEIS (*Archiv fuer Laryngologie und Rhinologie*, Band 13, Heft 3) calls attention to the lack of literature on the above subject, and states that it has received mention only in connection with mouth-breathing, without ascribing any special pathological significance to the snoring itself.

There are, according to the author, two kinds of snoring: one with the open mouth, the other with the closed mouth. The latter occurs only in adults, and only during inspiration, especially in corpulent individuals with short necks and fleshy tongues. When asleep the palate and especially the uvula are relaxed, and during inspiration are drawn down, producing the snoring. The direct cause of the snoring with the closed mouth is not definitely known, but the author believes it is due to difficult nasal breathing, and his explanation is that when the nasal passages are not entirely free the air passes through the nose and pharynx with a much swifter current, and in that way the palate and uvula are drawn downward, producing the noise, the same as when one attempts to clear the naso-pharynx.

Snoring with the open mouth occurs during both expiration and inspiration, and is produced by the movements of the uvula and palate, the direct cause being, in most cases, obstructed nasal breathing. This occurs at times in individuals who have, apparently, no nasal obstruction, but when in the recumbent posture the nose becomes occluded, totally or partially, this being due to a congestion or overfilling of the cavernous tissues. Again, snoring may occur when there is no nasal obstruction, but when asleep the muscles of the jaw relax and mouth opens, especially when the mouth is not tightly closed before falling asleep.

The symptoms which the author attributes to the snoring are caused by the backward and forward movement of the palate, and especially the uvula, causing a thickening and elongation of the latter, which may reach twice its normal size. Its color may be pale, edematous or dark red. This redness may extend over the entire posterior pharyngeal wall. The appearance is so typical that a diagnosis is easily made. These individuals complain of a burning, tickling, or feeling of foreign body in the throat, frequent desire to swallow, and frequent attempts at clearing the throat are made, thereby keeping up the hyperemia. The catarrhal condition extends upward to naso-pharynx and Eustachian tube, and below to the larynx and bronchi, causing well-known symptoms.

The successful treatment depends on the establishing of free nasal respiration and the sleeping with the mouth closed. The first condition is met by removing all abnormalities in the nose and pharynx, such as adenoids, polyps, hypertrophies, etc., and the latter by applying a suitable support to the jaw until the habit is overcome, which the author claims can be accomplished in from eight to fourteen days. Alcoholics and tobacco should be withdrawn and the condition of the bowels attended to. The results of the treatment of snoring with the closed mouth are not so flattering as that of the open mouth, but much can be accomplished if free nasal respiration is established and the general health looked into. If the uvula is much elongated, uvulotomy will have to be resorted to. By the curing of the snoring many cases of so-called incurable chronic pharyngeal catarrh can be easily and permanently relieved.

The Use of the Gelato-Glycerin Bougies in the Treatment of Acute Earache in Young Children.—RICHARDS (*Jour. A. M. A.*, January 24, 1903).—The author has for the past four years been using gelato-glycerin bougies in the treatment of acute earache in young children, especially in the early stage of acute otitis media, and in acute otitis externa with the best results. Cases which have gone beyond an early stage are not relieved by this remedy and demand treatment appropriate to the condition, whether paracentesis or otherwise. Even when paracentesis is performed, the insertion of the bougie immediately after will be of great relief and has distinctly curative value.

These bougies were originated by Professor Gruber, of Vienna, and later strongly advocated by Woods, of Dublin; but as neither of these authors gave the exact proportions of the glycerin and gelatine, their manufacture heretofore

had been attended with many difficulties. The author, with the aid of an apothecary, has solved the difficulty and gives a correct working formula and one that any pharmacist can use, viz.:

℞	Acidi carbolici	7 minims
	Fl. ext. opii	6 minims
	Cocaini	3 grains
	Atropini sulphatis	3 grains
	Aqua	52 minims
	Gelatini	18 grains
	Glycerini	158 grains.

To make 42 bougies.

The glycerini must be dehydrated. The bougie when prepared is kept in lycopodium or wrapped in tin foil. To use, the powder is washed off in warm water, or if wrapped in tin foil they are dipped in warm water. The bougie being very slippery is then slipped down into the external canal of the affected ear. The bougie soon dissolves, the anodyne is brought directly into contact with inflamed surfaces and the pain is relieved.

The Ear Complications of Typhoid Fever.—SCHUMACHER (*Wratschebnaga Gaseta*, No. 19, 1902; rev. *Zeitschrift fuer Ohrenheilkunde*, Band 42, Heft 1).—The author examined the ears of one hundred typhoid patients in the Children's Hospital of Oldenburg. These examinations were made regularly during the course of the disease. His conclusions are as follows: First, pathological changes occur in the ears of children in 47 per cent. of the cases during the course of typhoid fever, and in 78 per cent. of the cases where injection of the vessels of the tympanum are taken into consideration, or ten times oftener than in adults; second, the number and intensity of the ear complications are in direct relation to the severity of the disease; third, the infection occurs through the Eustachian tube and through the blood; fourth, cleansing the naso-pharynx by means of syringing must not be attempted, owing to the danger of forcing infectious material into the ear through the Eustachian tube; fifth, the ears of typhoid patients must be examined regularly. The neglect of these rules will often result seriously for the patient.

Chronic Nasal Catarrh in Its Relation to Asthma.—FARRELL (*International Medical Magazine*, February, 1903).—In the search for the underlying cause of the bronchial spasm, eliminate cardiac trouble, renal disease, gastric and intestinal disturbances, chronic bronchitis, rheumatism, gout and all dyscrasias of the blood, and then examine the nose and throat. Whatever may be the pathology of asthma, the exciting cause is frequently found in the nasal chamber. The author states that many cases of asthma are directly due to neglected nasal catarrh, and that fully 80 per cent. of his cases of asthma are cured by removing the abnormal conditions of the naso-pharynx, usually classed under the general head of chronic nasal catarrh; of the remaining 20 per cent. about one-half, or 10 per cent., are greatly benefited. The attacks are no longer feared and pass away in a few minutes, as a rule. The remaining 10 per cent. receive but slight relief. One point the author wishes to make, and that is that many patients that consult him for asthma claim that they have no nasal trouble and that they breathe freely through both nostrils. Examination of the nose often reveals nasal polypi in great numbers in just such cases.

On Certain Intermittent Swellings in the Nose and Their Treatment.—MUCK (*Archiv fuer Laryngologie und Rhinologie*, Band 13, Heft 3).—The cavernous tissues in the nose are often the cause of pathological conditions which manifest themselves in occlusion of the nose and a sense of fullness in the head. The patients state, as a rule, that the nose is stopped up only at times, and that they are frequently compelled to sleep with their mouths open. The rhinoscopic ex-

amination fails to elicit anything abnormal in the nasal chamber, as the psychic influence of the examination causes a contraction of these tissues. The post-rhinoscopic examination reveals the posterior ends of the inferior turbinates very pale and slightly enlarged with uneven surfaces, but not coming in contact with the septum the patients being able to breathe freely through the nose. In order to relieve this condition the author, by means of the cold snare, removes this enlargement at the posterior ends of the turbinates without applying any anesthetic. The enlargement is not cut off with the snare but is caught in the snare and then pulled out so that a part of the mucous membrane is also removed with it. The pain is insignificant and the bleeding very slight, and healing takes place in a few weeks and the nose always remains free.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

The Ocular Manifestations in Chronic Bright's Disease.—G. E. DE SCHWEINITZ (*Medicine*, December, 1902).—Sudden bilateral loss of sight—the so-called uremic amaurosis—may be accompanied by a peripapillary or general edema of the retina, though frequently the fundus is normal. The writer believes that some cases are due to toxins acting on the ganglion cells of the retina, while in others the retention of the pupillary reflex, in spite of absolute blindness, would indicate a lesion in the visual tract higher than the primary optic centers.

Typically albuminuric retinitis presents whitish spots at the macula, arranged in the shape of a star. An annular white zone may surround the disk, forming the so-called "snow bank of the retina." Hemorrhages of various shapes are scattered throughout the fundus. The veins are dark, tortuous and enlarged; the arteries unchanged or smaller than normal. The disk may be merely hyperemic or present the picture of a full-blown optic neuritis.

A degenerative type, in which small white spots sparsely distributed throughout the normal retina, inconspicuous hemorrhages and sclerotic changes in the vessel walls comprise the principal ophthalmoscopic appearances, is sometimes encountered.

In arterio-sclerosis, and hence in many cases of renal disease, it is important to note the ophthalmoscopic changes, which are very important from a diagnostic standpoint, as they are often obvious in cases in which the usual retinitis has not developed. These changes include (1) undue tortuosity and beading—*i. e.*, alternate contractions and widenings—of the retinal arteries; (2) increased distinctness of the central light streak, loss of translucency, anatomical changes in the arterial walls; (3) undue tortuosity and beading of the veins and impeded venous circulation where a diseased artery crosses the vein (manifest either by an ampulliform dilatation of the vein beyond the point of crossing or by a dilatation on either side of the point of crossing), and anatomical changes in the walls; (4) edema of the retina; (5) retinal hemorrhages.

Ocular lesions occur most frequently in chronic interstitial nephritis. Retinitis is found also in chronic parenchymatous nephritis and amyloid disease. Uremic amaurosis, though usually seen in acute nephritis, may appear also during an acute exacerbation of a chronic nephritis.

It is probable that the renal disease has existed some months at least before the retinal lesions appear, but anatomical changes in the vessels and venous compression incident to rigid retinal arteries are present long before albumin and casts appear in the urine.

The majority of cases of albuminuric retinitis occur between the ages of

forty and sixty, though a typical case has occurred as early as the fifth year. Probably twenty-five per cent. of the various forms of Bright's disease as they occur in general hospitals are affected by various forms of retinitis.

Prognosis as to vision depends on the character and situation of the exudates. The exudative varieties may clear up decidedly, but there is never a complete disappearance of the stellate exudate at the macula. Detachment of the retina, secondary atrophy of the optic nerve, retrobulbar neuritis, hemorrhages into the optic nerve sheath and secondary glaucoma occasionally supervene. Prognosis as to life is very bad, few patients living longer than two years.

The stellate figure at the macula, frequently described as typical of kidney disease, is found also in the eyes of many patients suffering from cerebellar tumor. Sometimes the retinal disease is unilateral. Iritis and a pigmentary degeneration of the retina are occasionally observed. Palsies of the external ocular muscles have been described.

Subconjunctival hemorrhages recurring at intervals should lead to a strong suspicion of chronic Bright's disease. They are apt to occur during the night, and have a tendency to clear up quickly. A recurring subcutaneous ecchymosis of the lower eyelid is not infrequent.

The Influence of Sleep on Ocular Affections.—De Micas (*Annales d'Oculistique*, December, 1902).—During sleep the upper lid tends to come in contact with the lower. There is often, however, an appreciable gap between the lid margins. The globe rotates upward and inward. Asymmetrical and irregular independent movements occur. The lachrymal secretion is notably diminished. Winking is almost entirely in abeyance. Conjunctival hyperemia is increased. The pupil is contracted.

The position of the cornea—the vertex pointing upward and inward—insures its being completely covered even when a gap exists between the upper and lower lid margins. Similarly, in lagophthalmos, it is the lower portion of the cornea and the conjunctiva below that suffers from exposure. The frequency of injury to the lower corneal segment is explained by the fact that the eye, when threatened by disaster, assumes the same position as in sleep. Compression and protection of the lids and the miosis of sleep favor the healing of corneal ulcers.

Asymmetrical and irregular independent movements of the eyes are especially characteristic of sleep. A strabismus may entirely disappear. The great diminution or complete disappearance of the tumor of mucocele is accounted for by diminished lachrymal secretion. A slight desiccation of the cornea is due in part to the lessened lachrymal secretion, in part to the inefficient distribution of tears incident to the absence of winking. The latter explains also the increased edematous swelling of the lids after sleep, the edema diminishing during waking hours under the influence of the massage exercised by the constantly moving lids. Increase in conjunctival hyperemia and the penning up of the discharge behind the motionless lids explains the fact that a conjunctivitis is often worse in the morning.

Miosis is constantly present, and is more pronounced the deeper the slumber. This accounts for the increase of pain in acute iritis which occurs just after the patient has fallen asleep. Similarly the pain of an acute glaucoma often decreases. The writer is inclined to believe that the transient improvement in vision in detachment of the retina, often observed after a night's rest, is due to the miosis of sleep.

In the administration of narcotics or sedatives the study of the pupil should determine which one to employ. As a general rule, if the ocular affection demand a mydriatic—*e. g.*, iritis—a mydriatic narcotic, such as belladonna, aconite, etc., should be exhibited. If the ocular eondition demand miosis, it is better to employ opium or chloral.

The loss of an eye, after cataract extraction, is sometimes due to cough in a bronchitic, brought on by the increased excito-motor power of the spinal cord during sleep.

BOOK REVIEWS.

DISEASES OF THE RECTUM AND ANUS. DESIGNED FOR STUDENTS AND PRACTITIONERS OF MEDICINE. By SAMUEL GOODWIN GANT, M. D., LL.D., Professor of Rectal and Anal Surgery at the New York Post-graduate Medical School and Hospital; Formerly Professor of Gastro-intestinal Surgery at the University and Woman's Medical Colleges, Kansas City, Missouri; Attending Surgeon for Rectal and Anal Diseases to the New York Post-graduate Hospital, St. Mark's Hospital, Hebrew Sheltering Guardian Orphan Asylum, and New York Infant Asylum; Member of the American Proctologic Society, American Medical Association, Mississippi Valley Medical Association, and New York Post-graduate Hospital Alumni Association, New York Academy of Medicine, County and Greater New York Medical Societies, and Honorary Member of the Missouri, Kansas and Nebraska State Medical Associations, Kansas City Academy of Medicine, etc. Second edition, rewritten and enlarged with thirty-seven full-page plates, twenty of which are in colors, and two hundred and twelve smaller engravings and half-tones. Pages, xxiv-687. Royal octavo. Extra cloth, $5.00 net; sheep or half-russia, $6.00 net, delivered. Philadelphia, Pennsylvania: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

In this we have another American text-book appearing in its second edition, the author giving as his good reason for the same, that the advances in his subject matter have necessitated the same. The author's removal from Kansas City to New York has of course supplied him with greatly augmented material for this kind of work. Three entirely new chapters have been added since the original appearance of the book, on the coccyx, venereal affections of the ano-rectal region, and recto-colic enteroliths. Many new illustrations have been added, some of the same being colored plates and wash-drawings which are above reproach. One of the valuable chapters of the book is that on the much neglected subject of examination of the feces. One of the valuable features of the first volume was that portion devoted to the study of cancer and colostomy, the same having been written by Allingham, the undoubted leader in the field of rectal surgery. With the advances in our science a special work in the various fields of surgery becomes an absolute necessity.

THE INTERNATIONAL TEXT-BOOK OF SURGERY. In two volumes. By American and British Authors. Edited by J. COLLINS WARREN, M. D., LL. D., F. R. C. S. (HON.), Professor of Surgery, Harvard Medical School; and A. PEARCE GOULD, M. S., F. R. C. S., of London, England. Second edition, thoroughly revised and enlarged. Vol. I. General and Operative Surgery. Royal octavo of 965 pages, with 461 illustrations, and 9 full-paged colored lithographic plates. Vol. II. Special or Regional Surgery. Royal octavo of 1122 pages, with 499 illustrations, and 8 full-paged colored lithographic plates. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, $5.00 net; sheep or half morocco, $6.00 net.

Whatever is said here in a review of this large work, must as a matter of course be largely a repetition of the matter which appeared in these columns concerning the first edition, comparatively recently. Since the appearance of the other edition, the "International" has been a decided favorite with practi-

tioners, though it might well be added that its size renders it less adapted to the wants of the student than some of its smaller competitors. As far as the book relates to naval and military surgery, these chapters have been rewritten along the line of progress which has made itself manifest during the African and other late wars. That portion of the book which relates to the surgery of the lymphatic apparatus has been decidedly changed, and in this particular the trend of the modern advances has been kept pace with. The illustrations in the first edition had attracted general favorable comment, and the reader of this edition will be pleased to note that they have been increased in number with many of the highest examples of this art. In preparing the second edition, it seems to have been the aim of the authors, not only to meet the want of the surgical public, but as well to satisfy their own feeling of what is required in such a work; thus in addition to what has been mentioned above, the chapters on the spleen and kidney have been revised and all in all the book rendered of the greatest practical value. The contributors number among them many of the best known surgeons in this country and England, thus assuring a more comprehensive grasp of the subject than can be possible where one man writes a book.

THE PRACTICE OF SURGERY. A Treatise on Surgery for the Use of Practitioners and Students. By HENRY H. WHARTON, M. D., and B. FARQUHAR CURTIS, M. D. Profusely illustrated. Third edition. Philadelphia and London: J. B. Lippincott Company. 1902.

Nothing could better illustrate the value of this book than the fact that it appears in the third edition only five years after its initial bid for the favor of those who require an American text-book on the subject under discussion.

The review of the second edition in these columns contained most of all that can be said on the third. There have been few changes either in the appearance or contents of the book. The chapter on surgery of the eye, has, I think, been very properly limited to the traumatic affections of that member and its surroundings. Why indeed should there be anything on the eye in such a work, when every practitioner has at least one special work on the subject?

It is difficult of course to treat of the immense subjects of general and special surgery in a single volume, but considering their natural limitations, the authors have furnished the doctor with a very fair working guide, considering of course that he will not attempt as a routine practice the work of the specialist in surgery.

A TEXT-BOOK OF THE SURGICAL PRINCIPLES AND SURGICAL DISEASES OF THE FACE, MOUTH AND JAWS. For Dental Students. By H. HORACE GRANT, A. M., M. D., Professor of Surgery and Clinical Surgery, Hospital College of Medicine; Professor of Oral Surgery, Louisville College of Dentistry, Louisville. Octavo volume of 231 pages, with 68 illustrations. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, $2.50, net.

This neat, moderate-sized volume is designed ostensibly to meet the requirements of the dentist who has an oral surgical operation to perform; but while it does reasonably well what it claims, still it goes a decided step farther and furnishes, tersely it must be admitted, all that the surgeon himself can demand for the ordinary run of cases. Here are dissertations on the various lessons of general surgery, anesthesia, inflammation, ulceration, tumors, etc., etc., as well as the treatment of dislocations, fractures and the various accidental affections, to say nothing of the embryonal malformations. The work is intended as an aid to the beginner in medicine as well as to his brother in dentistry, but it would seem to the reviewer that the practitioner in dentistry would be the one most of all to be benefited by its perusal.

The beauty of the binding, paper and type rather outclass most of the illustrations, the greater number of which are admittedly borrowed.

Lea's Series of Pocket Text-Books—Anatomy. A Manual for Students and Practitioners. By William H. Rockwell, Jr., M. D. Series edited by Bern. B. Gallaudet, M. D. Illustrated with 70 engravings. Lea Bros. & Co., Philadelphia and New York.

The author has, in presenting this worthy number of the well-known Lea series of pocket text-books, succeeded in furnishing at low cost, a work on descriptive anatomy which is concise and at the same time, to use his own words, fairly complete. The illustrations, so necessary to an understanding of anatomy, are of the best, as is evinced by the fact that they are taken from the leading English and Continental works on this subject. The external appearance of the new book can need no further comment, since the series to which it belongs is so well known. Gray's anatomy has been followed closely in the preparation of this manual, a matter which will aid the average American student when he desires to use a small work like this, intended merely for review, etc.

Diseases of the Pancreas and Their Surgical Treatment. By A. W. Mayo Robson, F. R. C. S., Senior Surgeon, Leeds General Infirmary; Emeritus Professor of Surgery, Yorkshire College, Victoria University, England; and B. G. A. Moynihan, M. S. (Lond.), F. R. C. S., Assistant Surgeon, Leeds General Infirmary; Consulting Surgeon to the Skipton and to the Mairfield Memorial Hospitals, England. Handsome octavo volume of 293 pages, illustrated. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, $3.00, net.

The comparative scarcity of information on this subject makes doubly welcome a work such as that which lies before us. The authors seem to have had in mind when writing the work, not only to tell us what has been done in this field, but to forecast future advances as well. In appearance this is a handsome work; the paper of fine, heavy quality, and the print somewhat larger than usual; the illustrations are, most of them, schematic in character, though all well executed. Especial stress must be laid upon the fact that the book combines the efforts of two distinguished surgeons. Robson being particularly well known for his work in abdominal surgery, especially that of the biliary apparatus; thus having worked with so much distinction in a field which is closely related to that under discussion, we naturally expect from the Leeds operator something far above the average in the work before us; nor is the reader disappointed. In its ten chapters, the book deals with the normal anatomy, physiology and pathology of this organ; taking up, at the same time, the experimental work which the authors and others have done in an effort to clear up matters of import to the clinical surgeon. The pancreas may be said to be considered fully and in a masterly way from every standpoint.

A Manual of Dissection and Practical Anatomy Founded on Gray and Gerrish. By William T. Eckley, M. D., Professor of Anatomy, and Corinne B. Eckley, Demonstrator of Anatomy in the Medical and Dental Departments of the University of Illinois. In one octavo volume of 400 pages, illustrated with 220 engravings, 116 of which are colored. Cloth, $3.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

For a student who is following Gray or Gerrish, this dissector will be of immense help, since the cuts are taken from the two standard works above men-

tioned. This may be taken, further, as an evidence of the excellence of these same cuts; and it may not be amiss to remind the reader that the illustrations play a more important part in a book on dissection than in any other. The general style of the work is the same which has always characterized the appearance of Gray's anatomy. There is no longer any questioning the fact that a student cannot get the greatest amount of good out of his dissection, with no other help than a book on descriptive anatomy, as was formerly the custom. Granted that the student must have a dissector, it remains but to be said that this latest acquisition is as far ahead of the older English works as the descriptive anatomies of to-day are in advance of those of fifty years ago. The authors have avowedly intended the book not only for the student, but for the practicing physician and the pathologist, and indeed it must be granted that it contains the store of information which a complete work on anatomy must offer, but, more than this, the material is so arranged that it is particularly useful, since it is so easy to get at.

Surgical Anatomy and Operative Surgery. For Students and Practitioners. By John J. McGrath, M. D., Professor of Surgical Anatomy and Operative Surgery at the New York Post-Graduate Medical School; Visiting Surgeon to the Harlan Hospital and Assistant Visiting Surgeon to the Columbus Hospital, New York. Illustrated with 227 illustrations, including colors and half-tones. Royal octavo. Extra cloth, $4.00, net; sheep or half Russia, $5.00 net, delivered. Philadelphia: F. A. Davis Company, Publishers, 1914–16 Cherry street.

The interdependence of regional anatomy and surgical technique is too apparent to need more than a passing mention, hence the value of a book which combines a study of the two. Of course, such a book of the size described above can hardly be a complete dissertation upon descriptive anatomy, nor does it claim to be; the authors have avowedly omitted all that does not appertain directly to some surgical operation. The illustrations are most of them diagramatic, the author claiming that such lend themselves most readily to teaching purposes (the book being a synopsis of his course in the New York Post-Graduate School). While the greater number of them make no especial claim as works of art, still all are apparently "original" and have, therefore, a definite value for the purchaser, since they represent something which he cannot already have in his library; a thing that cannot be said of nearly all the publications of the present day. In the chapter on the treatment of inguinal hernia I am pleased to note that the author gives the details of but two radical surgical procedures, viz., those of Bassini and Halsted. It has always been surprising that the most of the other writers have continued to inflict upon the busy practitioner all the useless and obsolete methods which have disgraced this field of surgery. McGrath does not make the beginner's choice difficult: he simply shows him the only two methods which will do the work. The same good taste characterizes the rest of the book.

Applied Surgical Anatomy Regionally Presented. For the Use of Students and Practitioners of Medicine. By George Woolsey, A. B., M. D., with 125 illustrations, mostly colored. Lea Brothers & Company, New York and Philadelphia. 1902.

There can be no doubt that anatomy, the bugbear of the medical student, is at the same time robbed of much that is uninteresting as well as made easier of acquisition when presented in a practical way. The beginner learns it more easily, and the practitioner recalls it more readily when both couple it with its various

relations, theoretical as well as useful in practice. It is seemingly the desire of Woolsey to embody the foregoing idea in the presentation of the subject as we have it in the work now under discussion. It is rather a handsome volume of 521 pages, so within the reach of all, so far as price is concerned. The illustrations are faultless, having been taken from a number of the world's most excellent anatomies, some of which are not within the reach of most of us, viz., Joessel, Tillaux, Merkel, etc. The author, after teaching twelve years, presents what he believes to be the best arrangement of the subject in this book. This is a point of no little importance, for it stands to reason that the average reader will find of most use a thing which has enabled the average medical student to grasp the subject in the most satisfactory manner. So much for the student. The book has something for the practitioner, on which too much stress cannot be laid, viz., it takes up, in connection with each bone, the fracture forms to which that especial bone is liable. Nor is this all; cerebral localization is considered in connection with the anatomy of the brain; dislocations are given, as well as the normal anatomy of the joints; a treatise on hare-lip completes the anatomy of the face, and in many other branches of the subject the endeavor is shown to crowd into a work on practical anatomy as many of the practical applications of the subject as possible.

The Public and the Doctor. By a Regular Physician. Published by Dr. B. E. Hadra, Dallas, Texas. Price, 50 cents.

This little book is intended to enlighten the masses as to medical matters, to help to subdue quackery, and to assist the rational physician in his many troubles with the ignorant and uninformed. We feel that the writer has fulfilled his task in an admirable way, and confess that we have read this booklet with great interest from the first to the last page.

Practical Diagnosis: The Use of Symptoms and Physical Signs in the Diagnosis of Disease. By Hobart Amory Hare, M. D., B. Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia, etc. Fifth edition; pp. 698, illustrated. Philadelphia and New York: Lea Bros. & Co. 1902.

The fifth edition of Hare's well-known text-book has been largely rewritten, to keep the volume abreast of the advances in diagnostic technique, and will be found quite as useful as were its predecessors when they were issued. The method pursued is just the reverse of that observed in books on medicine. The various signs and symptoms are taken up as such, and their significance and value for diagnosis discussed. In this manner the methods are followed which are ordinarily employed at the bedside: the symptoms of a disease are presented as they would be observed, and from this group of symptoms the reader is led to the diagnosis. Thus, if a patient has paraplegia, the reader will find in the chapter on the Feet and Legs a description of the symptoms of the various causes of this loss of power in the lower limbs, and so be led to a diagnosis of locomotor ataxia, myelitis or neuritis, as the case may be; and in the chapter on Vomiting there will be found discussed the various causes that produce this annoying and often dangerous symptom. Not the least useful feature of the volume is an elaborate and suggestive index.

The Medical Treatment of Gall-Stones. By J. H. Keay. P. Blakiston's Son & Co., Philadelphia. 1902.

This little work is not, as its name would indicate, devoted exclusively to a consideration of the medical treatment of gall-stones. On the contrary, it deals

more largely with the pathogenesis, the migration, complications, diagnosis, etc. The author maintains that the chief aim of medical treatment is not to expel the stones, nor to dissolve them, but to prevent their formation and to keep them at rest, etc.

The repetition of chapter II was doubtless an oversight, and detected too late for correction.

MANUAL THERAPEUTICS: A TREATISE ON MASSAGE, ITS HISTORY, MODE OF APPLICATION AND EFFECTS, INDICATIONS AND CONTRAINDICATIONS. By DOUGLAS GRAHAM, M. D. Third edition; pp. 462, illustrated. Philadelphia and London: J. B. Lippincott Co. 1902.

In spite of some very evident faults, Dr. Graham's book is well worth reading. The first chapter is devoted to an entertaining account of the history of massage and of massage as practiced among uncivilized peoples. Then follows a disquisition on the mode of applying massage in general, and a summary of the work done, chiefly in Germany, in connection with its physiological effects. The bulk of the volume is occupied by a discussion in extenso of massage as indicated in various diseased conditions. The illustrations, in general, are excellent, consisting chiefly of photographic representations of the various procedures utilized in this mode of treatment. They give the reader a far more vivid and accurate knowledge of the process than any amount of description, and replace in a measure the actual demonstration of the process on the part of the teacher. The book is written, however, in a far too discursive style. The author repeats himself frequently, and is constantly bringing in irrelevant matter. The volume would gain in every respect if it were condensed into two-thirds of its bulk.

PRACTICAL DIETETICS, WITH SPECIAL REFERENCE TO DIET IN DISEASE. By W. GILMAN THOMPSON, M. D., Professor of Medicine in the Cornell University Medical College, New York, etc. Second edition; pages 828, illustrated. New York: D. Appleton & Co. 1902.

The second edition of this delightful book will doubtless meet with a warm welcome. The first edition is so widely known that a detailed review of the second hardly seems necessary. As in the first edition, the account of the nature, manufacture and preparation of the foods and beverages useful in health and disease is so charmingly presented that the reader finds himself fascinated by what, in other hands, would have been a dry account of processes and analyses. The second half of the volume is devoted to diet in disease. A chapter is devoted to each of the great groups of disease: one to infectious diseases, one to diseases of the respiratory system, another to those of the alimentary canal, etc. An invaluable appendix containing receipts for the preparation of all sorts of foods and beverages suitable for the sick room is not the least useful portion of the volume. The book can be unreservedly recommended, and should be on the shelves of every practitioner.

A TEXT-BOOK OF MATERIA MEDICA, THERAPEUTICS AND PHARMACOLOGY. By GEORGE F. BUTLER, Ph. G., M. D., Professor of Materia Medica and Therapeutics in the College of Physicians and Surgeons, Chicago. Fourth edition, thoroughly revised. Pages 896, illustrated. Philadelphia and London: W. B. Saunders & Co. 1902.

The new edition of this useful work contains a number of important alterations and additions. It seems particularly devised as a text-book for the medical

student, but deserves also a place on the shelves, for reference, of the practitioner. The opening chapters on pharmacology and general therapeutics present a well-written discussion of the classification and administration of remedies, an exceedingly useful table of the untoward effects of drugs, and a chapter on the conversion into each other of the metric and apothecary systems. A systematic discussion of officinal and non-officinal preparations in general use takes up the bulk of the volume, and is followed by a chapter on prescription writing and prescription latin that will be useful to the student. A discussion of the theories of electrical disassociation and its bearing on pharmacology closes the volume. The weakest point of the book is in the discussion of the newer remedies, which is woefully incomplete. Not only do the newer drugs, less frequently prescribed, such as urocedin, dionin and phenol-phthalein, find no place in it, but drugs that are in constant use, such as urotropin, formaldehyde and asperin, are not mentioned. The text is followed by a useful index which, however, is not entirely free from the aggravating fault of occasionally referring the reader to the wrong page. Thus serum-therapy, the account of which begins on page 287, is referred to page 285. The volume will find its chief value as a text-book in medical schools.

DISEASES OF THE EYE. A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. DE SCHWEINITZ, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania, etc. With 280 illustrations and six chromo-lithographic plates. Fourth edition, thoroughly revised. Pages, 773. W. B. Saunders & Co., Philadelphia and London. 1902.

This splendid, medium-sized treatise, which has now reached its fourth edition, needs no introduction to the student of ophthalmology. Considering its relatively small size, the number of topics discussed is remarkable. Professor De Schweinitz possesses a style which is succinct and at the same time eminently clear and readable, so that his work, judged merely from its literary standpoint, is an especially meritorious performance. The present edition has been partly re-written and much new matter added. In a book of such general excellence it was perhaps invidious to ascribe unusual merit to any one portion, but the reviewer desires especially to commend the chapter on the "Movements of the Eyeballs and Their Anomalies," which for arrangement and scientific precision of statement leaves little to be desired. The book is primarily intended for the use of students and general practitioners, but a careful perusal will well repay the more advanced student of ophthalmology.

THE EYE, EAR, NOSE AND THROAT. Being Volume III of the Practical Medicine Series of Year Books under the general editorial charge of GUSTAVUS P. HEAD, M. D. Volume III edited by Casey A. Wood, C. M., M. D.; Albert H. Andrews, M. D.; T. Melville Hardie, A. M., M. D. Pages, 392. Issued December, 1902. The Year Book Publishers, 40 Dearborn street, Chicago, Ills.

This little volume is an excellent epitome of the principal advances in the special departments of ophthalmology, otology, rhinology and laryngology. It is manifestly a difficult task to compress within the limit of 400 pages a satisfactory review of all the more important papers that have appeared within a twelvemonth in the specialties under consideration. It is, therefore, much to the credit of the authors that they have succeeded in producing a very readable book, which gives in sufficient detail for clearness the results of the work of 1902. The editorial comments are usually to the point, and bespeak conscientious work on the part of the editors.

MANTON'S OBSTETRICS. A Manual of Obstetrics for Students and Practitioners. By W. P. MANTON, M. D., Adjunct-Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine. In one 12mo volume or 265 pages, with 82 illustrations. Cloth, $1.00. Lea Brothers & Co., Publishers, Philadelphia and New York. 1903.

This, the fourth volume of Lea's Series of Medical Epitomes, presents a clear compendium covering the essentials of obstetrics. It is written in admirably simple language, and its arrangement and scope give ample evidence of its author's experience in teaching this subject.

BOOK ON THE PHYSICIAN HIMSELF AND THINGS THAT CONCERN HIS REPUTATION AND SUCCESS. By D. W. CATHELL, M. D. The Twentieth Century Edition, being the eleventh edition, revised and enlarged by the author and his son, William T. Cathell, A. M., M. D. Pages, 411. Royal octavo. Extra cloth, $2.50 net, delivered. F. A. Davis Company, Publishers, 1914-16 Cherry street, Philadelphia.

"In order to make this book more worthy of the numerous commendations it has received" the authors have carefully revised almost every paragraph, have introduced so many facts and added so much new material that they have practically produced a new book.

This volume is too well known as to need any more praise. We recommend all those who have older editions to exchange them for this up-to-date "Twentieth Century Edition," an l sincerely advise all the young practitioners to carefully "study its pages from cover to cover."

THE MENOPAUSE. By ANDREW F. CURRIER, A. B., M. D. D. Appleton & Co., New York.

The aim which prompted the author to write this interesting volume is a high and noteworthy one. As he states in the preface, he was never able to see the sense nor the logic of the traditional teaching that the menopause was a serious—yea, even a most dangerous—time and experience. We feel certain that this book, based upon a most careful study of modern literature and a wide personal experience, will effectually succeed in eradicating the many erroneous views regarding the menopause carried over from one generation to the next. The author begins with a historical sketch, discusses the phenomena of normal and morbid menopause, considering especially the symptoms of artificial menopause, and concludes with a chapter devoted to the treatment of the ills of the climacterium. This little volume is undoubtedly the most exhaustive treatise on this subject in existence.

NERVENLEIDEN UND FRAUENLEIDEN. Von DR. OTTO WILLE. Verlag von Ferdinand Enke, Stuttgart. 1902.

The relation between diseases of the nervous system and the genital organs in the female is considered from three points of view, namely: how diseases of a single organ influence the general health, how disturbances of the general health interfere with the function of individual organs of the body, and, finally, which symptoms are caused by local disturbances. As regards the female genital organs, the author is inclined to believe that their influence upon the general condition usually is overrated. Many of the apparently gynecological symptoms are due to disturbances in the nervous system. How radical his views in this matter are may be easily inferred from the fact that he considers dysmenorrhea

a condition of pathological irritability of the nervous system which leads to spasmodic contractions of the uterus during menstruation.

This essay of forty-eight pages embodies in a concise form an exhaustive consideration of the subject. We heartily endorse No. 7 of the author's conclusion: "An exact knowledge of the general neuroses Hysteria, Neurasthenia and Nervosity is indispensable for every gynecologist."

FOR VARIOUS REASONS the *Journal of Cutaneous and Genito-Urinary Diseases* has become a journal devoted to the interests of dermatology and syphilis only, the genito-urinary feature having been eliminated. Dr. A. D. Newborn, of New York, is the acting editor, and the publication, under the name of "*The Journal of Cutaneous Diseases*," and in a new dress, appeared the first of the year. Under the new management the *Journal* is to be the official organ of the American Dermatological Association and the various dermatological clubs and societies throughout the country. Under the present auspices and support the *Journal of Cutaneous Diseases* should occupy a high position among the world's best periodicals, and we predict for it a brilliant future.

We wish to extend our sincere congratulations to Drs. J. C. Johnston and Swinburne, the retiring editors, upon the success of their heroic struggle of the last few years in keeping the *Journal* always up to its excellent standard against many trying and provoking circumstances.

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